Research Note 81-26

STUDY OF EFFECTIVENESS OF ARMY CONTINUING EDUCATION SYSTEM

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BASIC SKILLS INSTRUCTIONAL SYSTEMS TECHNICAL AREA

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The purpose of the research was to evaluate the impact of participation in the Army Continuing Education System (ACES) upon soldier performance. Four ACES programs were selected for evaluation: Basic Skills Education Program I, Literacy Phase (BSEP I-Lit); Basic Skills Program I English as a Second Language (BSEP I-ESL); Skill Development - General Vocational-Technical (Voc-Tech); and Veterans Educational Assistance Program (VEAP). Independent, dependent and control variables were selected and sample sizes were determined. Sources for-

obtaining the variable data were identified, including computerized sources and four installations were selected for manual collection of Vo-Tech data. A methodology was designed for the collection, storage and management of data. A comparative statistical analysis of the results was not completed due to problems encountered in accessing, obtaining and processing computerized and manual soldier performance data.

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EXECUTIVE SUMMARY

The Study of Effectiveness of Army Continuing Education System (ACES) was undertaken as part of the Army Research Institute for the Behavioral and Social Sciences' efforts to meet the need for an objective evaluation of ACES program participation effects on soldier performance. Part I of the study documented a methodology for conducting a cross-sectional and potential longitudinal research study designed to perform this evaluation. The objective of Part II was to conduct the cross-sectional study designed in Part I.

Four major tasks were completed in Part I which provided background for the conduct of Part II: (1) based on predetermined selection criteria, four ACES programs were chosen for evaluation: Basic Skills Education Program I, Literacy Phase (BSEP I-Lit), Basic Skills Program I, English as a Second Language (BSEP I-ESL), Skill Development - General Vocational-Technical (Vo-Tech), and Veterans Educational Assistance Program (VEAP); (2) potential independent, dependent, and control measurement variables were selected; (3) sources for obtaining the variable data were identified, including computerized sources and four installations selected for manual collection of the Vo-Tech program data: Forts Bliss, Bragg, Ord and Polk; and, (4) an evaluation design was developed for the comparative statistical analysis.

The Part II proposed methodology included three stages. The following two were completed at the conclusion of the project: (1) the final selection of measurement variables and estimation of the sample sizes and (2) the collection, storage and management of data. The third proposed stage, the comparative statistical analysis of the results, was not completed. The efforts required in accessing, obtaining, and processing soldier performance data from Army computerized data files exhausted the time schedule and resources available for the project.

The final variable selections were based on a preliminary examination of the data available from the identified sources and a refinement of the evaluation design. In addition, two efforts were eliminated from the planned methodology: the VEAP evaluation and Vo-Tech data collection from Fort Ord.

The collection, storage and management of data is documented according to the two data collection modes: manual and computerized. The manual data collection effort involved the development, pilot testing, and revision of forms and procedures; site visits; and tabulating and processing results. Problems encountered with education or personnel records which might have an impact on soldier record accuracy were noted and reported.

The computerized data collection and processing included developing a data accession plan, describing the data sought, procedure development, and describing procedures for performing the analysis. The data accession plan presented strategies for defining and selecting samples, collecting data for the four ACES programs, and obtaining control and dependent variables from the computerized sources. The data sought was based on the defined program sample. Requests for the data were made to the Training and Doctrine Command (TRADOC), Military Personnel Center (MILPERCEN), Defense Manpower Data Center (DMDC), and the Vo-Tech data were encoded on the computer.

The procedures developed for updating and creating records served three distinct purposes: (1) to add data to the master file, (2) to obtain data from the master file, and (3) the manipulation of tapes. The procedures were self-documenting and specifications for those implemented were developed. Ten files, envisioned during the design phase, and the basic purposes and procedures for these files are described. Several procedures for performing the analysis were implemented which simplified gaining access to the data and execution of an SPSS program (Statistical Package for the Social Sciences), including procedures to create or extract from the master file. A sample SPSS program is presented with the appropriate set of program variables appended. Problems encountered in the development and implementation of these procedures were noted.

A preliminary analysis was performed which demonstrated that the system operated as planned, but the quality of the data obtained was less than expected. The sample sizes obtained and matching birthdate and sex variable comparisons among the various data sources are presented and discussed. Low retrieval rates and low matching rates (53 to 76 percent) on the basic variables selected for quality checks, birthdate and sex, decreased confidence in the quality of the remaining data. Potential causes for the discrepancies and suggested actions required to overcome the problems are discussed.

A summary of problems encountered during the collection, storage and management of data is presented. The Vo-Tech data collection problems encountered included lack of standardization in data records, missing follow-up course data, and low incidence of recorded data on participation in ACES programs in general, which affects obtaining satisfactory sample sizes for groups of soldier participants.

The problems encountered in the computerized data collection efforts included the use of the not up-to-date Exec 8 operating system, arbitrary file limitations placed on the users, lack of direct access to personnel with expertise in using this system, the time expended in going through the "hierarchy" to execute requests or obtain answers to questions, and problems in signing-on due to overworked phone trunk lines. Suggested causes and a discussion of possible resolutions for overcoming these problems are discussed. These considerations present implications for any subsequent linking of ACES data and soldier performance data in an evaluation of ACES program impact.

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on

STUDY OF EFFECTIVENESS OF ARMY
CONTINUING EDUCATION SYSTEM
(CONTRACT MDA903 79-C-0397)

to

U.S. ARMY RESEARCH INSTITUTE FOR THE
BEHAVIORAL AND SOCIAL SCIENCES

from

BATTELLE-COLUMBUS LABORATORIES

August 12, 1981

INTRODUCTION

The Army Continuing Education System (ACES) provides programs designed to enhance the educational development of active duty personnel as well as increase military job progression and skill proficiency. The Education Directorate, Adjutant General's Center, as the administering agency of ACES, has expressed a need for an objective evaluation of the relationship between participation in ACES and effects on soldier performance.

Factors contributing to the need for this evaluation include: (1) the General Educational Development (GED) program charter in 1956, which included education for increased military efficiency, (2) ACES' focus on personal development of individual service members, and (3) the increasing importance of the impact of ACES on Army career development and Army job progression.

In Part I of this project, Battelle designed a methodology for an empirical cross-sectional and potential longitudinal study to determine whether or not there is evidence that ACES has a statistically significant positive impact on duty performance of soldiers. The objective of Part II was to conduct the cross-sectional study designed in Part I. Figure 1 is a Draft Final Report Outline, developed during the last reporting period of the project, which describes the major steps anticipated to obtain and process the data, conduct the statistical analysis, and prepare a research report of the results. This report documents the implementation of the

study methodology through the summary of problems encountered during the collection, storage, and management of data. The comparative statistical analysis, and subsequent results, conclusions and recommendations based on the analysis were not completed because of the problems encountered in accessing, obtaining, and processing soldier performance data from the computerized data files at the Defense Manpower Data Center (DMDC) and the Military Personnel Center (MILPERCEN). Several extensions of the contract performance period were required because of these data accession and processing problems. Both the Battelle-Columbus staff and the Army Research Institute representatives extended their best efforts to overcome these problems. However, project time schedules and resources were exhausted in this effort. Moreover, the quality of the data accessed through these efforts precluded the performance of the planned comparative statistical analysis.

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  3. Prepare Research Report

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FIGURE 1. FINAL REPORT OUTLINE ON STUDY OF EFFECTIVENESS OF ARMY CONTINUING EDUCATION SYSTEMS, PART II

BACKGROUND

Part I of this study involved completion of four major activities: (1) development of criteria for and selection of the ACES programs for evaluation, (2) selection of measurement variables for ACES participant versus nonparticipant comparisons, (3) identification of sources for needed data, and (4) creation of an evaluation design for the Part II cross-sectional analysis and the potential longitudinal analysis. The results of Part I are fully documented in the Part I Technical Report, dated January 25, 1980 and revised March 5, 1980. A summary of these results is presented below.

ACES Programs Selected

Eleven ACES programs were considered for potential evaluation. Program descriptions, data available, and potential problems with the evaluation were documented. Criteria for program selection were then developed and presented in a rating scale format. Rating scales were completed by ARI, TAGCEN, and Battelle staff representatives and then combined into a consensual rating, shown in Figure 2. Using the rating scale results and previously identified program evaluation problems, the following four ACES programs were selected.

- Basic Skills Education Program I - Literacy Phase (BSEP I - LIT)
- Basic Skills Education Program I - English as a Second Language (BSEP I - ESL)
- Skill Development - General Vocational Technical Program (Vo-Tech)
- Veteran's Educational Assistance Program (VEAP)

Five technologies within the Vo-Tech program area were selected for study: Automotive, Diesel, Welding, Electronics, and Construction. These particular Vo-Tech courses provide soldiers opportunities in MOS related skills as well as marketable civilian skills.

A decision was made during Part II not to analyze the VEAP program since these data are analyzed annually in an ongoing Department of Defense-wide study.

	Adequate Size of Participant Group	Adequate Size of Non-Participant Group	Available & Accurate Participant Data	Operational Indicator of Program Completion or Degree of Participation in the Program	Probable Impact on Military Proficiency	Probable Impact on Army Career Progression	Ease of Data Collection	Perceived Significance to the Army	TOTAL	A Variety of ACES Programs; e.g., Academic, Skill Development, & Skill Documentation
1. Basic Skills Education Program I	+	+	+	+	+	+	+	+	8	1
2. Basic Skills Education Program II	+	+	0	+	+	+	+	+	7	
3. High School Completion Program	-	+	0	+	+	+	-	0	2	
4. Association Degree Program (SOCAD)	+	+	0	+	+	+	-	+	5	
5. Bachelor's Degree & Higher Degree Programs (SOC)	0	+	0	+	+	+	-	0	3	
6. Army Apprenticeship Program	+	+	+	+	-	-	+	0	3	
7. Skill Development Program a. MOS Refresher Program	+	0	0	-	+	+	-	+	2	
b. Vo-Tech Program	+	+	0	+	0	0	-	+	3	4
8. HEADSTART/GATEWAY	+	-	+	+	0	0	-	+	2	
9. English as a Second Language	+	-	0	+	+	+	+	+	7	2
10. Veterans' Educational Assistance Program	+	+	+	+	0	0	+	+	6	3

FIGURE 2. ACES PROGRAM SELECTION RATING FORM

Measurement Variables Identified

Tables 1 through 3 present the potential measurement variables identified and documented in Part I of the study. The independent variables listed in Table 1 are program-specific factors such as participation/eligibility, completion status, length of instruction, pre- and post-test scores. The dependent variables presented in Table 2 are indicators of soldier value to the Army through measures such as performance on the job, career progression, and attitude. The selected control variables presented in Table 3 are used to compare the experimental groups on basic demographic, background, and aptitude characteristics. These potential measurement variables were further refined and selections were made in Part II based on such criteria as accessibility and accuracy of records.

Primary Data Sources

Also listed in Tables 1 through 3 are the potential sources identified for the variable data. The primary sources to be used from these lists are:

- TRADOC - Training and Doctrine Command, Fort Monroe, VA
- DMDC - Defense Manpower Data Center, Washington, DC
- MILPERCEN - Military Personnel Center, Alexandria, VA
- TSC - Training Support Center, Fort Eustis, VA
- EREC - Enlisted Records Evaluation Center, Fort Benjamin, Harrison, IN
- MPRJ - Military Personnel Records Jacket (DA Form 201), Military Personnel Offices (MILPOS) at selected Army posts
- Education Development Record (DA Form 669), Education Offices at selected Army posts.

Most of the measurement variables were available through computerized data sources with the exception of the Vo-Tech program. This information was only available in individual soldier education and personnel records and therefore had to be accessed manually.

TABLE 1. POTENTIAL INDEPENDENT VARIABLES

Variables	Data Sources: DA Form 1821-2-R(1)	DA Form 1821-1-R(2)	DA Form 669(3)	Records Kept At Post Ed Center(4)	TAGCEN(5)	DMDC(6)	MILPERCEN(7)	201 File(8)
BSEP I								
Participation/Eligibility								
• Successful Completion			X					
• Unsuccessful Completion			X					
• Incomplete Participation			X					
• No Participation	X		X					
Program Variables								
• Days Enrolled	X							
• Period of Enrollment	X							
• Pre/Post Scores	X							
• Primary Language	X							
BSEP II								
Participation/Eligibility								
• Successful Completion		X	X					
• Unsuccessful Completion		X	X					
• Incomplete Participation		X	X					
• No Participation		X	X					
Program Variables								
• Hours of Instruction		X						
• Period of Enrollment		X						
• Pre/Post Scores		X						
• GED Attempt		X	X					
HSCP								
Participation/Eligibility								
• Successful Completion			X	X				
• Unsuccessful Completion				X				
• Incomplete Participation				X				
• Participation-GED Comp.				X				
• BSEP II Participation			X	X				
• No Participation								
Program Variables								
• Highest Year of Education						X	X	X
• No. of Units Acquired By Subject			X					
SOC/SOCAD								
Participation/Eligibility								
• Successful Completion AA			X				X	
• Successful Completion BA			X				X	
• Successful Completion Other			X				X	
• Non Participant but Eligible: HSD or GED			X				X	
Program Variables								
• Length of Time Since Eligible*								
• Presently Participating No. of Residential* Credits								
• Period of Enrollment			X					
• Time Since Last Enrollment			X					

*to be computed from other data

(1) BSEP I data form kept at TRADOC

(2) BSEP II form kept at TRASANA

(3) A form which lists a soldier's civilian/military education and training, kept at the soldier's resident Education Center

(4) Post education center records

(5) The Adjutant General's Center

(6) Defense Manpower Data Center

(7) Military Personnel Center

(8) DA 201 File located at resident post - Master Personnel Records File

TABLE 1. (Continued)

Variables	Data Sources: DA Form 1821-2-R	DA Form 1821-1-R	DA Form 669	Records Kept At Post Ed Center	TAGCEN	DMDC	MILPERCEN	201 File
ARMY APPRENTICESHIP								
Participation/Eligibility By MOS								
• Successful Completion					X			
• Presently Participating					X			
• No Longer Participating					X			
• Non Participants								
Program Variables								
• Length of Time Since Awarded MOS					X			
• Hours Logged Training								
• Hours Logged On The Job								
• Period of Enrollment					X			
SKILL DEVELOPMENT-GENERAL VOCATIONAL TECHNICAL								
Participation/Eligibility								
• Degrees or Certificates Awarded			X					
Program Variables								
• Length of Time Since Acquired MOS (AIT Graduation Date)				X				
• Relevance of Course to Duty MOS							X	
• Period of Enrollment								
SKILL DEVELOPMENT-MOS REFRESHER/DEVELOPMENT								
Participation/Eligibility								
• Successful Completion				X				
• Non Successful Completion				X				
• Non Participants								
Program Variables								
• Length of Time Since Acquired MOS (AIT Graduation Date)							X	
• Amount of Time in MOS Before MOS Refresher			X					
• Amount of Time Since MOS Refresher			X					
• Hours of Instruction				X				
HEADSTART/GATEWAY								
Participation/Eligibility								
• Completed Program			X					
• Incomplete Participation			X					
Program Variables								
ESL (ONLY BY TEST REFERRAL)								
Participation/Eligibility								
• Eligibility Under 70 ECLT	X	X						
Program Variables								
• Time Enrolled	X	X						
• Period of Enrollment	X	X						
• Pre/Post ECLT	X	X						
VEAP								
Participation/Eligibility								
• Contributing (Entered After 12/31/76)					X			
• Non Contributing (Entered After 12/31/76)					X			
Program Variables								
• Length of Time Contributing					X			
• Reenlistment							X	X

TABLE 2. POTENTIAL DEPENDENT VARIABLES AND RELATED IDENTIFIERS

Variables	Data Sources						
	MILPERCEN(1)	DMDC(2)	EER/SEER(3)	201(4)	EREC(5)	PPWS(6)	TSC(7)
JOB SKILL AND KNOWLEDGE PROFICIENCY							
• SQT - Performance Certification Component							X
• SQT - Written Component							X
• SQT - Hands-on Component							X
• SQT - Overall (% of "GO" units)	X				X		X
• SQT - Form Number							X
• Scope of Knowledge About Duties(8)			X X				
• Demonstrated Overall Performance(8)			X X				
• EER - Total Score			X X		X		
• EER - Weighted Average	X		X X		X		
• PMOS - in Which Tested (SQT)	X				X		X
• PMOS - Evaluation Score	X						
• PMOS - Evaluation Score Date	X						
• PMOS - in Which Tested	X						
• PMOS - Skill Level - SQ Identifier	X						
PROMOTION/ADVANCEMENT							
• Advancement Potential(8)			X X				
• Career Progression (Ranks and Dates)				X			
• Promotion Potential Score (1000 Pt. Rating)						X	
REENLISTMENT							
• Reenlistment Eligibility	X						
• Number of Times Enlisted/Reenlisted	X			X			
DISCIPLINE							
• Personal Conduct(8)			X X				
• Ability to Work in Harmony(8)			X				
• Character of Separation (Discharge from service)	X			X			
• AWOL	X			X			
• Type of Last Return to Military Control	X						

(1) Military Personnel Center
(2) Defense Manpower Data Center
(3) Enlisted Evaluation Report/Senior Enlisted Evaluation Report, both located in 201 File
(4) DA 201 File located at resident base - Master Personnel Records File containing all personnel records for a soldier
(5) Enlisted Records Evaluation Center at Ft. Benjamin Harrison, Indiana (Official Master Personnel File plus some computerized SQT/EER data)
(6) Promotion Point Worksheet located in 201 File
(7) Training Support Center located at Ft. Eustis, VA.
(8) These scores are still under consideration and are found on the EER and/or SEER. They are the subscores from which the total EER score is based.

TABLE 2. (Continued)

Variables	Data Sources						
	MILPERCEN	DMDC	ER/SER		201	EREC	PPWS	TSC
MOTIVATION								
• Effort directed toward realization of potential(S)			X	X	X			
• Agressive pursuit of methods to improve(S)			X		X			
• Awards and Decorations					X	X	X	
ATTITUDE								
• Attitude Toward Duties(S)			X	X	X			
• Dependability(S)			X		X			
LEADERSHIP								
• Exerts Positive Influence on Others(S)			X	X	X			
MILITARY BEARING								
• Military Bearing(S)			X	X	X			
• Physically Fit(S)			X	X	X			
TRAINING RECEIVED								
• NCO Education System	X							
• PMOS - How Acquired	X							
• AIT Graduation Date	X							
• Military Education						X	X	

TABLE 3. SELECTED CONTROL VARIABLES AND IDENTIFIERS

Personal Characteristics

- Age
- Race and Ethnic Group
- Sex
- Marital Status
- Number Years of Education
- Native Language

Job-Related

- Duty MOS
- Career Management Field
- Number Years of Service
- Time Since AIT Completion
- Grade Level

Test Scores

- AFQT Score
- GT Score (General Technical Aptitude)
- Mental Category (General Mental Ability)
- Specific Aptitude Test Scores from ASVAB (as and if appropriate)
- SelectABLE Scores

Posts Selected for Vo-Tech Data

Four CONUS installations were selected for manual collection of Vo-Tech data from soldier education and personnel records. The selection of the installations was based on the size of the military population (the largest posts were preferred), the number of Vo-Tech courses provided on-post (the larger number was preferred), type of command (both Forces Command (FORSCOM) and Training Doctrine Command (TRADOC) to be represented), and ease of data collection. Based on this criteria, the following four posts were selected in addition to Fort Knox, Kentucky, the site selected to pilot-test data collection procedures and forms.

- Fort Bragg, North Carolina
- Fort Bliss, Texas
- Fort Polk, Louisiana
- Fort Ord, California

Fort Ord was subsequently dropped as a data collection site. It was determined by the Battelle project team and ARI representatives that data collection from Forts Polk, Bragg, and Bliss would reflect an adequate mix of the FORSCOM and the TRADOC activities and the elimination of this site visit would conserve resources.

Evaluation Design

The basic study design called for comparisons of participant and nonparticipant groups for each of the four selected ACES programs, with respect to criteria reflecting a soldier's value to the Army. This design was intended to yield the "impact" each program has on soldiers' value to the Army. Two methods of analysis were anticipated: regression analysis and matched group comparisons. For the evaluation of a given ACES program, the data would be analyzed using both regression analysis and a matching design. If the results of the two analyses disagreed, then the reason for disagreement would be sought. If the results of the two analyses agreed, then a stronger conclusion could be drawn about the program.

METHODOLOGY

The proposed methodology involved three major tasks: (1) the final selection of measurement variables and estimation of the sample sizes, (2) the collection, storage, and management of data, and (3) a statistical analysis of the results. Tasks 1 and 2 were completed at the conclusion of the project and are discussed below. Task 3, the statistical analysis of results, was not conducted for reasons stated previously in the INTRODUCTION section of this report.

Final Selection of Measurement Variables And Estimated Sample Sizes

Tables 4 through 6 present the final variable selections based on a refinement of the evaluation design and preliminary examination of the data available from the identified sources. Table 7 lists the approximate sample sizes needed for the evaluation of each program. As reported in the Computerized Data Collection and Processing section of this report, additional refinement was made to the variable selections due to problems encountered after the sources were accessed. The Vo-Tech sample size was also redefined as the result of the elimination of the Fort Ord data-collection site.

Collection, Storage, and Management of Data

This section is presented according to the two data collection modes: manual and computerized. The Vo-Tech manual data collection efforts describe the development of data collection procedures and forms, pilot test of forms and procedures, data collection site visits and results, and problems encountered. The computerized data collection and processing documents the data accession plan, the data sought, procedure development, general comments on data processing, procedures to perform analysis, and preliminary analysis. The remainder of this section lists the problems encountered during the data collection, storage and management phase of the project.

Vo-Tech Program Data Collection

During the first stages of this task, arrangements were made to visit the selected posts, including setting dates for visits, obtaining names of individuals coordinating the on-site visits, and preparation of documentation for official permission to access files. The Vo-Tech program data were then collected manually from individual soldier's education and personnel records. Described below are the development of procedures and forms, pilot test, data collection site visits and results, and problems encountered.

TABLE 4. BASIC SKILLS EDUCATION PROGRAM (BSEP I - LITERACY PHASE) - VARIABLES AND SOURCES

Control Variables	Primary Source	Alternate Source(s)*
SSN	TRADOC	
AGE	DMDC	MILPERCEN
SEX	TRADOC	DMDC/MILPERCEN
RACE	TRADOC	DMDC/MILPERCEN
ETHNIC GROUP	DMDC	MILPERCEN
NUMBER YEARS OF EDUCATION	TRADOC	DMDC/MILPERCEN
NUMBER MONTHS OF SERVICE	MILPERCEN	
AFQT SCORES	DMDC	MILPERCEN
GT SCORES	MILPERCEN	
MENTAL CATEGORY	TRADOC	
SelectABLE SCORE	TRADOC	
Dependent Variables		
CAREER PROGRESSION		
-GRADE LEVEL ATTAINED	MILPERCEN	TSC
-TIME TO GRADE E2	MILPERCEN	
-TIME TO GRADE E3	MILPERCEN	
TRAINING SUCCESS		
-SUCCESSFUL COMPLETION OF AIT vs NOT	TRADOC	MILPERCEN
DISCHARGED FROM SERVICE (because of poor training performance) vs NOT	TRADOC	MILPERCEN

* For selected cases, data was obtained from both primary and alternate sources as a cross check for accuracy.

TABLE 5. BASIC SKILLS EDUCATION PROGRAM (BSEP I - ESL PHASE) - VARIABLES AND SOURCES

Control Variables	Primary Source	Alternate Source(s)*
SSN	TRADOC	
AGE	DMDC	MILPERCEN
SEX	TRADOC	DMDC/MILPERCEN
RACE	TRADOC	DMDC/MILPERCEN
ETHNIC GROUP	DMDC	MILPERCEN
NUMBER YEARS OF EDUCATION	TRADOC	DMDC/MILPERCEN
NUMBER MONTHS OF SERVICE	MILPERCEN	
AFQT SCORES	DMDC	MILPERCEN
GT SCORES	MILPERCEN	
MENTAL CATEGORY	TRADOC	
ECLT SCORE	TRADOC	
NATIVE LANGUAGE	TRADOC	
Dependent Variables		
CAREER PROGRESSION		
-GRADE LEVEL ATTAINED	MILPERCEN	TSC
-TIME TO GRADE E2	MILPERCEN	
-TIME TO GRADE E3	MILPERCEN	
TRAINING SUCCESS		
-SUCCESSFUL COMPLETION OF AIT vs NOT	TRADOC	MILPERCEN
DISCHARGED FROM SERVICE (because of poor training performance) vs NOT	TRADOC	MILPERCEN

*For selected cases, data, was obtained from both primary and alternate sources as a cross check for accuracy.

TABLE 6. SKILL DEVELOPMENT - GENERAL VOCATIONAL TECHNICAL PROGRAM (VO-TECH) - VARIABLES AND SOURCES

Control Variables	Primary Source*	Alternate Source(s)**
SSN	MPRJ Form 201	DMDC/MILPERCEN
AGE	MPRJ Form 201	DMDC/MILPERCEN
SEX	MPRJ Form 201	DMDC/MILPERCEN
RACE	MPRJ Form 201	DMDC/MILPERCEN
ETHNIC GROUP	MILPERCEN	
NUMBER OF YEARS OF EDUCATION	MPRJ Form 201	DMDC/MILPERCEN
NUMBER MONTHS OF SERVICE	MPRJ Form 201	DMDC/MILPERCEN
NATIVE LANGUAGE	MPRJ Form 201	TRADOC
CAREER MANAGEMENT FIELD	MPRJ Form 201	MILPERCEN
ACCESSION DATE	MPRJ Form 201	MILPERCEN
VO-TECH COURSE TITLES/HOURS	DA Form 669	
VO-TECH COURSE COMPLETIONS	DA Form 669	
BASIC PAY ENTRY DATE (BPED)	DA Form 669	MILPERCEN
ESTIMATED TIME OF SEPARATION(ETS)	DA Form 669	MILPERCEN
One of the following:		
AFQT SCORES	MPRJ Form 201	MILPERCEN
GT SCORES	MPRJ Form 201	MILPERCEN
MENTAL CATEGORY	MPRJ Form 201	TRADOC
Dependent Variables		
CAREER PROGRESSION		
-GRADE LEVEL ATTAINED	MPRJ Form 201	MILPERCEN
-TIME TO GRADE E5	MPRJ Form 201	MILPERCEN
-TIME TO GRADE E6	MPRJ Form 201	MILPERCEN
MOST RECENT EER (selected parts)	MPRJ Form 201	EREC
MOST RECENT SQT (selected parts)	MPRJ Form 201	MILPERCEN/TSC
MOST RECENT PROMOTION POINTS (selected parts)	MPRJ Form 201	
NUMBER OF DISCIPLINARY ACTIONS	MPRJ Form 201	
RE-ENLISTMENTS	MPRJ Form 201	MILPERCEN

* Data was collected from DA Form 669 and MPRJ Form 201 when not computerized. Form 669 is computerized at Fort Polk and the Standard Installation/Division Personnel System (SIDPERS) maintain some computerized data and this was utilized.

** For selected cases, data was obtained from both primary and alternate sources as a cross check for accuracy.

TABLE 7. APPROXIMATE SAMPLE SIZE NEEDED OR AVAILABLE FOR EACH PROGRAM EVALUATION AND DATA SOURCES*

Program	Sources	Approximate Number	
BSEP I - Literacy Phase	TRADOC MILPERCEN DMDC	14,000	(includes participants and eligible nonparticipants from 10/1/78)
BSEP I - ESL Phase	TRADOC MILPERCEN DMDC	3,400	(includes participants and eligible nonparticipants from 10/1/78)
SKILL DEVELOPMENT (VO-TECH)	MILPERCEN TRADOC TSC DMDC MPRJ FORM 201 DA FORM 669	1,000	(includes 500 participants and 500 nonparticipants - 200-300 from each post, depending on post size)
VEAP	VA MILPERCEN TRADOC DMDC	7,000	(includes all new accessions during April 1977 - approximately 1400 participants and 5600 nonparticipants)
TOTAL		25,000	

*For the total number of soldiers in the sample, Social Security Numbers and Date of Birth from each source are required as identification variables.

Development of Data Collection Procedures and Forms. The number of enlisted personnel at each site for which data were to be collected was determined by dividing the number of enlisted personnel stationed at a given post by the total number of enlisted personnel at all selected posts, then multiplying the obtained decimal fraction by 1,000 (the original sample size for the Vo-Tech program). This operation provided an equal number of participants and nonparticipants from the enlisted personnel at a given post. Data were then collected in two stages.

The first stage involved collection of data from the DA Form 669 records. A systematic sampling with a random start procedure was used to select the sample. Sample selection and collection of data from the DA Form 669 records involved the following six steps:

Step 1. Determine the physical length of DA 669 Forms stored at a given post by multiplying the number of drawers by the length of each full drawer containing records.

Step 2. Determine the interval length to be used to select the sample by dividing the physical length of forms as determined in Step 1 by the desired number of program participants.

Step 3. Determine the random starting point by counting the number of forms in the first interval and, using a table of random numbers, select a starting point which was less than or equal to the number of forms in that interval.

Step 4. Select a participant for the sample by examining each DA Form 669 from the starting point until a form is found that meets the participant criteria in one of the five selected Vo-Tech courses: automotive, diesel, welding, electronics or construction technology on or after June 1977. Transcribe course data onto the data collection form.

Step 5. Select the "matched" nonparticipant by choosing the next DA Form 669 for a soldier who has completed Advanced Individual Training but did not participate in a vocational-technical course. Transcribe demographic "control" data onto the data collection form.

Step 6. Select each subsequent participant and nonparticipant by repeating Steps 4 and 5 at the designated intervals determined in Step 2. If no participant was found in a given interval, then two participants were selected from the next interval. The record selected in this manner for the second participant could come before or after the first nonparticipant selected.

The second stage involved collecting data from the DA Form 201 records for both participants and nonparticipants selected in Stage 1. At each installation, most of the 201 Jackets were located at a central location, either the Military Personnel Office (MILPO) or the Adjutant General Office (AG). When the selected 201 Jackets were obtained at this central location, data were transcribed onto the data collection form. When the 201 Jackets were not in the files, these data were not obtained. Records (201 Jackets) missing from the files were almost always attributable to the soldier being currently outprocessed or already having left the installation. Due to time constraints, no effort was made to locate the missing records.

Figure 3 presents the two-sided form developed for collection of the Vo-Tech participant/nonparticipant data, with the DA Form 669 data and the DA Form 201 data to be recorded on opposite sides. The Vo-Tech 669 data collection form consisted of identification information (SSN and ETS), Vo-Tech participation, description of courses taken, completion status, and other ACES program participation. The Vo-Tech 201 Data Collection form listed identification and demographic information (SSN, Birthdate, Race, Sex and Education Level), grade rank, selected test and/or rating scores, disciplinary action events, and selected relevant dates.

Pilot Test of Forms and Procedures. The purpose of the Vo-Tech program pilot test was to rigorously test the data collection forms and procedures. This was done during a one-day site visit to Fort Knox, Kentucky. Using the procedures previously described, data were collected on 15 participants and 15 nonparticipants of the Vo-Tech program courses selected. The data were collected from two Education Centers and two Military Personnel Offices.

The results of the pilot test indicated that only minor modifications of the sampling and data collection procedures and the data collection forms were required. The sampling procedure had to be modified to the plan previously reported, i.e., matching nonparticipants were selected from the DA Form 669 files. It was originally planned to collect participant data from the 669 files, then proceed to the 201 Jackets to select nonparticipants. The modification was necessary because the data collectors were not given direct access to the DA Form 201 Jackets. The requested 201 Jackets had to be "pulled" by military personnel, which required selecting the nonparticipants as well as the participants in advance.

The data collection form was modified as a result of the pilot test to exclude Armed Forces Qualification Test (AFQT) scores, because this information could not be obtained from the 201 Jackets. Other minor modifications were also made to the form.

VO/TECH
669 DATA COLLECTION FORM

SSN	ETS
---------- 9	YR MO DAY 15

VO/TECH PARTICIPATION

1. YES 2. NO — 16

TYPE: Automotive — 17

Diesel — 18

Welding — 19

Electronics — 20

Construction — 21

OTHER ACES PARTICIPATION

None — 22

BSEP I II ESL — 23

HSCP — 24

SOCAD SOC — 25

APPRENTICESHIP — 26

MOS REFRESHER — 27

HEADSTART GATEWAY ESL — 28

VEAP — 29

VO/TECH COURSES

Title	CODE	BASE	HOURS	COMPLETED
1.	30-32	33-35	36-38	39
2.	40-42	43-45	46-48	49
3.	50-52	53-55	56-58	59
4.	60-62	63-65	66-68	69
5.	70-72	73-75	76-78	79

2 80 ---------- 9

6.	10-12	13-15	16-18	19
7.	20-22	23-25	26-28	29
8.	30-32	33-35	36-38	39
9.	40-42	43-45	46-48	49
10.	50-52	53-55	56-58	59

3 80

FIGURE 3. VO-TECH DATA COLLECTION FORM

VO/TECH 201 DATA COLLECTION FORM

FORM						
DA 2	2. SSN _ _ _ _ _ _ _ _ _ 9	41. GT Score _ _ _ 12	42. Education Level _ 13	52. Date of Birth _ _ YR _ _ MO _ _ DAY 19	53. Race _ 20	54. Sex _ 21

DA 2-1	18. Grade _ _ 23	18. Appointment Date E5 _ _ YR _ _ MO _ _ DAY 29	18. Appointment Date E6 _ _ YR _ _ MO _ _ DAY 35	20. Basic Enlisted Service Date _ _ YR _ _ MO _ _ DAY 41

			FORM		
	35. Date of First MOS _ _ YR _ _ MO _ _ DAY 47	35. Duty MOS _ _ _ _ _ 52	DD 4	9. Previous Active Military Service _ _ YRS _ _ MOS _ _ DAYS 58	10. Agreement Date _ _ YR _ _ MO _ _ DAY 64

DA 2166 or USAEREC 10A	EER Score (REPT Score or EERWA) 1. REPT _ 2. EERWA _ 68 _ _ _ 67 DATE	DA 3355	3B. Promotion Points _ _ _ _ 72

DA 268	Disciplinary Actions _ 73	DA 2627	Disciplinary Actions _ 74	_ _ _ _ _ 79 _ 80

Data Collection Site Visits and Results. The Vo-Tech site visits to Fort Polk and Fort Bragg were made by two data collectors during the weeks of July 7-11, 1980 and July 14-18, 1980, respectively. Data from Fort Bliss were collected by one person during the week of August 10-15, 1980. A total of 675 cases were collected: 341 Vo-Tech participants and 334 Vo-Tech nonparticipants. Table 8 presents a summary of the Vo-Tech data collected by post. Since the starting point for all manual data collection was the DA Form 669, these data exist for all of the 675 cases. A 201 Jacket was not found for every previously collected 669 case. Partial "201" data were collected at two installations. At Fort Bragg, there were some cases where the 201 Jacket was not available, but a computer listing with some of the needed data was available. The partial data that could be obtained from the computer listing was used in these cases. At Fort Bliss, only partial 201 data were collected for each soldier. The 201 data that was collected was the information that was not available from any known computerized source.

Problems Encountered

As previously stated, data were collected manually for the Vo-Tech program at three installations and pre-tested at a fourth installation. In collecting data at four different bases, four problems were encountered at the Education Centers: (1) lack of standardization; (2) lack of follow-up; (3) missing demographic data; and (4) missing ACES program data.

Lack of Standardization. Each Education Center has its own coding techniques. The title for any Vo-Tech course only has meaning within the installation where the course was taught, and sometimes only within the particular education center. There is then no way of equating a course title with the level of difficulty or with the actual subject matter covered. For example, a notation might read "auto mechanics course" and could be an identifier for anything from Introduction to Auto Repair to Steering Suspension Systems. Lack of standardization in course content identifiers creates a problem for the soldier when he/she changes bases and for the next Education Center. It becomes impractical for the new Education Center to ascertain from the record exactly what the soldier has been taught in the past. One solution to this problem would be a post-wide uniformity of course titles, with the pertinent course descriptions included in each soldier's education record. Another is an Army-wide determination of what must be covered in each Vo-Tech course. This latter solution would make it easier for the soldier to document this type of coursework for the civilian community.

Lack of Follow-Up. The data collectors observed that in many cases, courses are recorded when a soldier enrolls, but the outcome of that course is not noted. From the record it is impossible to determine

TABLE 8. SUMMARY OF VO-TECH DATA COLLECTED

	INSTALLATION			
Participants	Polk	Bragg	Bliss	Total
Complete 201 data	84	101	-	185
Partial 201 data	-	3	66	69
No 201 data	25	42	20	87
Total	109	146	86	341
Non-Participants				
Complete 201 data	89	106	-	195
Partial 201 data	-	7	64	71
No 201 data	22	25	21	68
Total	111	138	85	334
TOTAL	220	284	171	675*

*The number of unique cases was 672 (3 of those collected were duplicates).

if that course was completed and, if completed, whether the soldier passed and with what grade, or if he/she completed the course and failed, or if the soldier dropped out before course completion. To correct this situation, counselors would probably have to institute some sort of flagging system for follow-up. The time required for this might make it prohibitive for most counselors. But, without this, any course lacking closure documentation is almost worthless to the soldier.

Missing Demographic Data. The only demographic data that was frequently found missing or expired was the ETS (Estimated Time of Separation). Since this datum is available on the Military Personal Records, it should be obtained and recorded on the Education Record.

Missing ACES Program Data. Examination of the Education Record revealed that participation in ACES programs such as SOCAD, SOC, Apprenticeship and VEAP was rarely recorded. Since it is known that these programs have greater participation than was recorded, it can be assumed that these Education Records are incomplete and that this incompleteness of recording is also true for the Vo-Tech program.

Most, if not all, of the problems mentioned could be corrected if reporting and recording educational data were mandatory during either inprocessing or outprocessing, or both.

There were only two minor problems that were encountered in collecting demographic data from the DA Form 201 Jackets. The first was that many forms in the jacket had to be examined in order to get the data for variables that were needed for this study. The second problem was that folders were occasionally missing from the file because they were being used for outprocessing, etc. These problems were encountered because of the type of data collection used in this study and do not appear to pose a problem for Army operations.

Computerized Data Collection and Processing

Data Accession Plan

During Part I of the project, the project team determined that data would be required from TRADOC, MILPERCEN, DMDC, VA, TSC, possibly EREC, and from the selected Army posts. Consequently, a plan for accessing these data was created that would minimize the number of requests required and, yet, acquire all desired data. That plan is presented pictorially in Figure 4. Basically, the plan can be summarized as follows:

ACES CROSS-SECTIONAL STUDY

SYSTEM FLOW

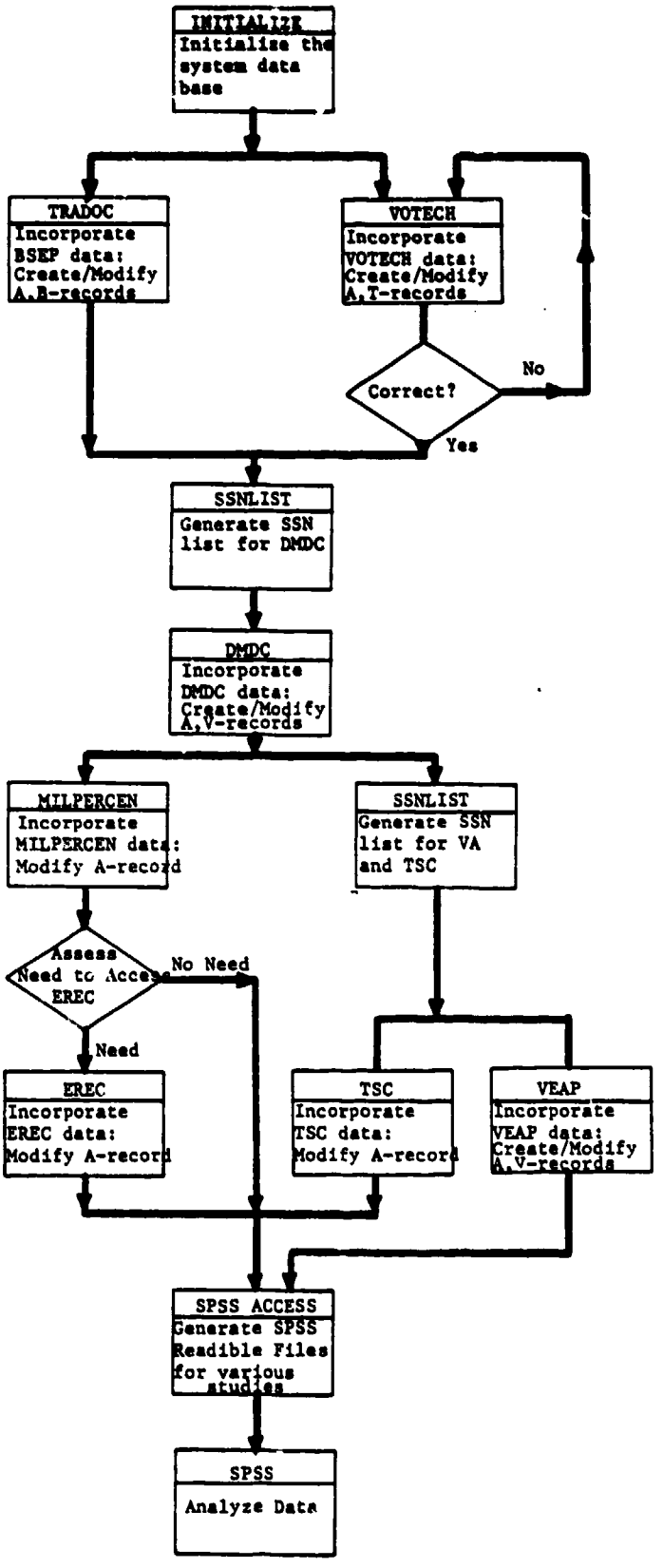

FIGURE 4. DATA ACCESS FLOW

1. Define and select BSEP I LIT and BSEP I ESL samples and capture data for several independent variables from TRADOC.

2. Define and select Vo-Tech sample and collect data manually at the selected Army posts.

3. Define and select VEAP sample by accessing the USAREC file at DMDC of all soldiers who entered the Army during a particular time period.

4. Obtain data for other control and dependent variables for the above samples from DMDC, MILPERCEN, EREC, TSC, and VA.

5. Merge these data into a computer file capable of being read by the Statistical Package for the Social Sciences* (SPSS).

The accession plan was not carried out quite as planned. Data were obtained from TRADOC and from the Army posts as planned in June through August, 1980. During August, a tape was received from MILPERCEN containing data on all soldiers who entered the Army after January, 1977. This tape was requested because the soldiers in the BSEP I study entered the Army after this date. Consequently, this tape should have satisfied most of our needs for data from MILPERCEN.

A decision to not study the VEAP program had been made in the interim. Therefore, the data requests to MILPERCEN and DMDC were simplified. After a list of SSN's (Social Security Numbers) had been constructed from the TRADOC and Vo-Tech sources, the list was sent to DMDC. The list was not immediately sent to MILPERCEN because a low match-rate on the earlier MILPERCEN tape (approximately 50 percent) indicated there might be problems either at TRADOC or at MILPERCEN. The list was not sent to TSC because TSC needed information on soldier accession dates to access their files.

Because of problems at DMDC, the data tape was not received until April, 1981. In the meantime, the SSN list was sent to MILPERCEN in spite of potential problems, and a tape was received, also in April, 1981.

At this point, all data was merged onto a file on the UNIVAC 1108 computer at Edgewood Arsenal and a preliminary analysis was performed. Because incomplete responses to the data requests were found, no further requests were made.

---

*Nie, N. H., et. al., "Statistical Package for the Social Sciences", McGraw Hill, 1970.

Data Sought

(1) TRADOC

- TRADOC was requested to send all data collected in connection with the BSEP I Literacy and BSEP I ESL programs. The variables available for study are located in the B-record.
- These data were dumped from tape ARI 162 to a disk file using the utility program ATX. The disk file was loaded into the Master file via procedure TRADOC.
- There were 9,418 records on the tape, of which 8,893 were eligible for inclusion in the Literacy or ESL study. A record was rejected if it was a duplicate or if the SelectABLE score was too high.

(2) Army Posts

- Data on the Vo-Tech program was collected manually at three Army posts. The data were encoded on computer cards and loaded into the T-record.
- The cards were loaded onto a disk file and from there loaded into the Master file via procedure VOTECH.
- There were 672 soldiers for whom data were collected for the Vo-Tech study.

(3) MILPERCEN

- MILPERCEN was requested to send data which would be used as control and dependent variables in the analysis. Two requests were made, one for all soldiers who entered the Army after January, 1977, the other for soldiers whose SSN's were on a list supplied to MILPERCEN. These data are located in columns 38-116 of the A-record.
- The first request was sent on tape ARI 182 which contained 380,490 records. The tape was dumped to disk using procedure TAPEDMP and from there loaded into the Master file via procedure MILPERCEN.
- This process resulted in approximately 50 percent matches between the TRADOC and Vo-Tech records and those from MILPERCEN, an unexpectedly low figure.

- The second request was sent on tape ARI 306 which contained 4,050 records (9,566 SSN's were submitted). This tape was dumped to disk via procedure TAPEDMP (which was modified because of a change in record length) and from there loaded into the Master file via the procedure MILPERCEN (also modified because of a change in record layout).

- 4,048 of these records were placed in the Master file (the others were duplicate).

(4) DMDC

- DMDC was also requested to supply data which would be used as control and independent variables. Some of these overlapped those requested from MILPERCEN for two reasons:

  1. There should be some measure of reliability between the two sources

  2. MILPERCEN purges soldiers who have left the Army, so those soldiers would only be present on DMDC's USAREC and Master and Loss files.

  The variables available for study are located in columns 121 to 244 of the A-record.

- These data were dumped from tape ARI 317 to a disk file using the utility program ATX. One problem occurred in this dump in that ATX could not handle 133 character length records (132 is maximum). Fortunately, 133 = 17 x 19, so seven 19-character records were written for each logical record on the tape. The disk file was then loaded into the Master file via procedure DMDC.

- 5,627 of the DMDC records had data for the 9,566 requested (DMDC filled the record with zeros when a match wasn't possible).

Procedure Development

The procedures were designed in such a way that they could be used for updating or creation. This was deemed appropriate since numerous problems were expected. There are essentially three types of procedures:

1. Procedures to add data to the Master file. These include INITIALIZE, TRADOC, VOTECH, DMDC, MILPERCEN, EREC, TSC, and VEAP. All are very similar in that they merge a sequential file, ordered by SSN, into the Master file.

2. Procedures to obtain data from the Master file. These include SSN and SPSS ACCESS. They basically pass sequentially through the file and write data to a sequential file.

3. Procedures to manipulate tapes. The only one developed is TAPEDMP.

These procedures, which are located in Appendix A, are written in such a way as to be self-documenting. The specifications procedures which were implemented are located in Appendix B. The following comments were used as general rules in implementing the procedures.

(1) All dates are stored in the format YYMMDD.

(2) Whenever a record is added to the Master file, the birthdate and sex are placed into the control area if not already present. Consequently, the control birthdate and sex represent those items for the first sources accessed.

(3) Whenever any of the four status flags are non-zero, there must be a corresponding B, T, or V record present.

(4) Data from sources are moved via a MOVE CORRESPONDING so that

(a) Only required data are stored.

(b) If later, more data are needed, the procedure can be easily modified to add data, by just changing the layout in the Data Division.

(5) Records in the ACES-STUDY-MASTER-FILE are accessed as though already present. If not present, they are initialized. The advantages to this scheme are:

(a) The same procedures can be used for record creation and updating (though initial processing will take slightly longer).

(b) The order of execution of the various procedures is less strict.

(c) Soldiers involved in more than one study are easy to process.

(6) In all procedures, processing includes a dump of a sufficient number of records for sight verification, e.g.,

For the first 25 A-records updated, dump --

1. All records to that point on the input data tape

2. The A-record before and after updating.

(7) In the data division, levels are initially assigned odd numbers (01, 03, 05, etc.).

(8) Initialization phase always includes --

(a) A message identifying which procedure is beginning execution.

(b) A 1-line print of the 000 00 0000 Z record.

(9) All procedures begin and end by printing the Master File Status, Figure 5 on the following page, plus other information shown as appropriate.

There were 10 files envisioned during the design phase of the procedures. These are listed in Table 9 together with information on those that were accessed. Appendix B presents the basic purpose of each procedure together with the files needed and the general processing design.

Procedures to Perform Analysis

Several procedures have been implemented to simplify gaining access to the data and to execute an SPSS program (all are under project ID: ACES). The procedures are as follows:

(1) To create an extract of the Master file which can be read by SPSS, enter:

```
@ ASG,A FILES

@ ADD FILES.CREATE
```

When prompted, enter the type of file desired.

(2) To create an SPSS program, use the standard editor. Some examples are in filename SPSS.

(3) To execute an SPSS program, whose control statements are in SPSS.ALL1, for instance, enter:

```
@ ASG,A FILES

@ ADD FILES. RUN

@ ADD SPSS.ALL1
```

I. MASTER FILE STATUS

TIME 125314

DATE 810701

TYPE RECORD	FREQUENCIES
A	0
R	0
T	0
V	0
TOTAL	000

DATE INITIALIZED 810701

DATE LAST MODIFIED 810701

II. PROCEDURE STATUS COUNTERS (procedure dependent)

e.g., A. Number of records on tape file -

B. Number of B records written -

C. Types of errors encountered -

etc.

III. ACES PROCEDURE STATUS COUNTERS (procedure dependent)

e.g., A. Number of participants in BSEP I Literacy phase.

FIGURE 5. MASTER FILE STATUS REPORT

TABLE 9. FILE DESCRIPTION SUMMARY

1. ACES-STUDY-MASTER-FILE

   This indexed-sequential file has a 10-character key constructed from the SSN/ASN and the record-type descriptor. It contains all data available for analysis for the cross-sectional study. Record size: 300 characters, blocking factor: 30 records.

2. TRADOC-DATA-TAPE

   This tape file is received from TRADOC and contains all data collected in conjunction with the BSEP I program. Record size: 80 characters, unblocked.

3. VO-TECH-DATA-TAPE

   This card file contains the data collected at the posts to be used in studying the Vo-Tech program. Up to three cards per soldier.

4. SSN-LIST-TAPE

   This tape file is created from the ACES-STUDY-MASTER-FILE. It contains the SSN/ASN of every soldier currently on file. This tape is sequentially ordered by SSN. Record size: 30 characters. Blocking factor: Variable, depending on destination.

5. DMDC-DATA-TAPE

   This tape file is received from DMDC and it contains data requested on certain soldiers. This tape is sequentially ordered by SSN. Record size: 133 characters, blocking factor: 40 records.

6. MILPERCEN-DATA-TAPE

   This tape file from MILPERCEN contains selected data on all soldiers currently in the service (enlisted personnel). This tape is sequentially ordered by SSN.

TABLE 9. (C ntinued)

ARI 182: Record size: 83 characters, blocking factor: 30 records.

ARI 306: Record size: 88 characters, blocking factor: 30 records.

7. TSC-DATA-TAPE

This tape from TSC contains the SQT component scores for all soldiers in the study. This tape is sequentially ordered by SSN. (This tape was not requested.)

8. VEAP-DATA-TAPE

This tape file contains all data available at the VA for soldiers in the study. This tape is sequentially ordered by SSN. (This tape was not requested.)

9. EREC-DATA-TAPE

If EREC is accessed, this file will contain the data. (This tape was not requested.)

10. SPSS-DATA-TAPE

This tape is created from the ACES-STUDY-MASTER-FILE. It contains all data needed for a particular study in a format compatible with SPSS. For each record type requested, 3 records of 120 characters each are written (UNIVAC SPSS has a maximum input record length of 132 characters).

A sample SPSS program using this system is described in the following pages (see Figure 6). Appendix C presents the set of SPSS program variables developed. This is the program used to define the sample sizes and calculate the discrepancies presented in this report. Only the first task control cards are described. This program was created using the UNIVAC editor on a file called SPSS.ALL1. It was executed as follows:

```
> @ ASG,A FILES

> @ ADD FILES.CREATE

> @ 2 (In response to the type of raw file to be created)

> @ ADD FILES.RUN

> @ ADD SPSS.ALL1.
```

There were numerous problems that had to be overcome in the development and implementation of these procedures. Some of the more noteworthy include:

- The use of an outdated, overworked computer system, the Edgewood Arsenal UNIVAC 1108 under the EXEC 8 operating system.
- The arbitrary limitations placed on the user in the, supposedly, ANSI COBOL and SPSS on this computer. (Especially, on records sizes of files used for I/O (input/output).
- The lack of expert assistance of the staff operating this computer. For instance, apparently few personnel operating this computer have used random access files or COBOL.
- The inability to contact directly those personnel who supply the requested data. Requests for data had to be routed through intermediaries. This process caused communication problems and loss of time.
- The necessity to go through a hierarchy of contacts to get even a simple question answered.
- Problems of signing on the computer because of overused phone trunk lines into Edgewood Arsenal.

```
SPSS BATCH SYSTEM                                                    07/01/81

SPSS FOR SPERRY UNIVAC 1100 EXEC 8, VERSION H, RELEASE 8.1-UW1.1, DECEMBER 1980
>

SPACE ALLOCATION..          ALLOWS FOR..    85 TRANSFORMATIONS
WORKSPACE    17500 WORDS                   332 RECODE VALUES + LAG VARIABLES
TRANSPACE     2500 WORDS                   664 IF/COMPUTE OPERATIONS

  1.  RUN NAME       ALL1 - GENERAL STATS AND SAMPLE SIZES
  2.  FILE NAME      ALL1
  3.  VARIABLE LIST  SSN, LITFLG, ESLFLG, TECHFLG, MILPFLG, DMDCFLG,
  4.                    DOBYY, DOBMM, DOBDD, SEXCNTRL, SEXMILP, MYY, MMM, MDD,
  5.                    PQDES, PSQDT, PQSCR, PQPER,
  6.                    DYY, DMM, DDD, SEXDMDC,
  7.                    SSNTRAD, SEXTRAD, SSNTECH, TYY, TMM, TDD, SEXTECH
  8.  INPUT MEDIUM   TAPE
  9.  INPUT FORMAT   FIXED (F9.0,1X,3F1.0,1X,2F1.0,14X,3F2.0,2A1,2X,3A2,
 10.                    52X,A4,A4,A3,A2,/,
 11.                    3F2.0,2X,A1,//,F9.0,26X,A1,///,F9.0,5X,3F2.0,1X,A1,//)

    ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

    VARIABLE  FORMAT  RECORD    COLUMNS

    SSN       F 9. 0      1     1-  9
    LITFLG    F 1. 0      1    11- 11
    ESLFLG    F 1. 0      1    12- 12
    TECHFLG   F 1. 0      1    13- 13
    MILPFLG   F 1. 0      1    15- 15
    DMDCFLG   F 1. 0      1    16- 16
    DOBYY     F 2. 0      1    31- 32
    DOBMM     F 2. 0      1    33- 34
    DOBDD     F 2. 0      1    35- 36
    SEXCNTRL    A 1       1    37- 37
    SEXMILP     A 1       1    38- 38
    MYY         A 2       1    41- 42
    MMM         A 2       1    43- 44
    MDD         A 2       1    45- 46
    PQDES       A 4       1    99- 102
    PSQDT       A 4       1   103- 106
    PQSCR       A 3       1   107- 109
    PQPER       A 2       1   110- 111
    DYY       F 2. 0      2     1-  2
    DMM       F 2. 0      2     3-  4
    DDD       F 2. 0      2     5-  6
    SEXDMDC     A 1       2     9-  9
    SSNTRAD   F 9. 0      4     1-  9
    SEXTRAD     A 1       4    36- 36
    SSNTECH   F 9. 0      7     1-  9
    TYY       F 2. 0      7    15- 16
    TMM       F 2. 0      7    17- 18
    TDD       F 2. 0      7    19- 20

ALL1 - GENERAL STATS AND SAMPLE SIZES
```

FIGURE 6. SAMPLE SPSS PROGRAM

```
                ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

                VARIABLE  FORMAT  RECORD    COLUMNS

                SEXTECH      A 1       7    22-  22

THE INPUT FORMAT PROVIDES FOR  29 VARIABLES.   29 WILL BE READ
IT PROVIDES FOR  9 RECORDS ('CARDS') PER CASE.  A MAXIMUM OF  111 'COLUMNS' ARE USED ON A RECORD.

          12.  N OF CASES      UNKNOWN
          13.  RECODE          MYY, MMM, MDD (' ' = '00')
          14.  RECODE          MYY, MMM, MDD (CONVERT)
          15.  COMPUTE         BOTHFLG = 0
          16.  IF              (MILPFLG EQ 1 AND DMDCFLG EQ 1) BOTHFLG = 1
          17.  IF              (SSNTRAD GT 0) TRAHERE = 1
          18.  IF              (SSNTECH GT 0) TECHHERE = 1
          19.  COMPUTE         CNTDAYS = YRMODA (DOBYY,DOBMM,DOBDD)
          20.  COMPUTE         MILPDAYS = YRMODA (MYY,MMM,MDD)
          21.  COMPUTE         DMDCDAYS = YRMODA (DYY,DMM,DDD)
          22.  COMPUTE         TECHDAYS = YRMODA (TYY,TMM,TDD)
          23.  COMPUTE         CNTMIL = ABS (CNTDAYS - MILPDAYS)
          24.  COMPUTE         CNTDMD = ABS (CNTDAYS - DMDCDAYS)
          25.  COMPUTE         CNTTEC = ABS (CNTDAYS - TECHDAYS)
          26.  COMPUTE         MILDMD = ABS (MILPDAYS - DMDCDAYS)
          27.  COMPUTE         MILTEC = ABS (MILPDAYS - TECHDAYS)
          28.  COMPUTE         DMDTEC = ABS (DMDCDAYS - TECHDAYS)
          29.  RECODE          CNTMIL TO DMDTEC (0 THRU 30 = 1) (31 THRU HI = 2)
          30.  RECODE          SEXDMDC ('1' = 'M') ('2' = 'F')
          31.  DO REPEAT       IN = SEXMILP, SEXDMDC, SEXTECH /
          32.                     OUT = SCNTMIL, SCNTDMD, SCNTTECH /
          33.  COMPUTE         OUT = 0
          34.  IF              (SEXCNTRL EQ 'M' OR 'F' AND IN EQ 'M' OR 'F') OUT = 1
          35.  IF              (OUT EQ 1 AND SEXCNTRL EQ IN) OUT = 2
          36.  END REPEAT



          37.  DO REPEAT       IN =  SEXDMDC, SEXTECH /
          38.                     OUT = SMILDMD, SMILTECH /
          39.  COMPUTE         OUT = 0
          40.  IF              (SEXMILP EQ 'M' OR 'F' AND IN EQ 'M' OR 'F') OUT = 1
          41.  IF              (OUT EQ 1 AND SEXMILP EQ IN) OUT = 2
          42.  END REPEAT



          43.  COMPUTE         SDMDTECH = 0
          44.  IF              (SEXDMDC EQ 'M' OR 'F' AND SEXTECH EQ 'M' OR 'F') SDMDTECH = 1
          45.  IF              (SDMDTECH EQ 1 AND SEXDMDC EQ SEXTECH) SDMDTECH = 2
          46.  ASSIGN MISSING  CNTDAYS TO DMDTEC (-1)
          47.  PRINT FORMATS   SEXCNTRL, SEXDMDC, SEXMILP, SEXTRAD, SEXTECH (A)
          48.                  PQDES, PSQDT, PQSCR, PQPER (A)
          49.  TASK NAME       INTEGRITY CHECK
          50.  *SELECT IF      (SSN NE SSNTRAD AND SSNTECH)
          51.  LIST CASES      CASES=3 / VARIABLES = ALL
ALL1 - GENERAL STATS AND SAMPLE SIZES                                    07/01/81
INTEGRITY CHECK
          52.  FREQUENCIES     GENERAL = SEXCNTRL
          53.  OPTIONS         5

GIVEN WORKSPACE ALLOWS FOR   4375 VALUES AND   1749 LABELS PER VARIABLE FOR 'FREQUENCIES'


*EXECUTION TERMINATED*
```

FIGURE 6. (Continued)

Preliminary Analysis

Only a very rudimentary analysis was performed. The purpose of this analysis was to verify that the system operated properly and to determine the quality of some of the data obtained.

The analysis demonstrated that the system operated as planned. However, the quality of the data obtained was less than was expected. The first indicator of poor quality was the low retrieval rate at both DMDC and MILPERCEN. The achieved sample sizes of each study, broken out by the number of matches at DMDC and MILPERCEN, is presented in Table 10. The table reveals that only 34 percent of the BSEP I Literacy sample have both records, 54 percent of the BSEP I ESL sample have both records, and 68 percent of the Vo-Tech sample have both records. Because almost all of these soldiers entered the Army after January, 1977, it was expected that the match rate at DMDC would approach 100 percent. Data for soldiers who have dropped out of the Army should be missing at MILPERCEN, so 100 percent retrieval was not expected. However, almost 100 percent retrieval of the data for the Vo-Tech sample was expected.

The next quality check performed was to conduct a comparison between the birthdates available at the various sources. The results are presented in Table 11. As can be seen in the table, there is some disagreement even when permitting a 30-day error in birthdate matches. A similar check was performed on the sex designation of the soldier by source and those results are presented in Table 12. The discrepancy numbers, i.e., cases for which both sources have data on birthdate or sex but the data do not match, in these two tables are not large, but any discrepancy on basic variables like birthdate and sex decreases confidence in the quality of the remaining data. It is especially disappointing to observe the disagreement between MILPERCEN and DMDC (DMDC files contain refined MILPERCEN raw data).

The other check performed was to determine the quality of the SQT data provided by MILPERCEN. This check was made to determine if accessing TSC for SQT data would be necessary. For the Vo-Tech sample of 672 shown in Table 10, only 139 SQT scores were recorded in the MILPERCEN data. Thus, MILPERCEN does not appear to be a good source of SQT data.

It was not possible to identify the causes of the missing and discrepant data. However, some questions concerning potential causes are appropriate:

- Are the SSN's supplied by TRADOC accurate? There is some doubt that the TRADOC SSN's are accurate because they did not match SSN's supplied by MILPERCEN using two different access methods.

TABLE 10. SAMPLE SIZES WITH DMDC AND MILPERCEN DATA MATCHES

	Sample Size	Those With DMDC Data	%	Those With MILPERCEN Data	%	Those With Both	%
BSEP I LITERACY	6482	3453	53.3	2291	35.3	2185	33.7
Participant	2138	1307	61.1	879	41.1	845	39.5
Non-Participant	4344	2146	49.4	1412	32.5	1340	30.8
BSEP I ESL	2411	1667	69.1	1352	56.1	1304	54.1
Participant	1395	1068	76.6	897	64.3	864	61.9
Non-Participant	1016	599	59.0	455	44.8	440	43.3
Vo-Tech	672	508	75.6	581	86.5	454	67.6
Participant	338	248	73.4	283	83.7	213	63.0
Non-Participant	334	260	77.8	298	89.2	241	72.2

TABLE 11. BIRTHDATE COMPARISONS

	Sample Size	Dates Within 30 Days	Dates Not Within 30 Days	Comparison Not Possible**
CONTROL* vs. MILPERCEN	9564	4194	9	5361
CONTROL vs. DMDC	9564	5537	89	3938
MILPERCEN vs. DMDC	9564	3850	91	5623
MILPERCEN vs. Vo-Tech	672	352	4	9208
DMDC vs. Vo-Tech	672	295	6	9263

* CONTROL is from either TRADOC or Vo-Tech.
** Not computable because one or both birthdates are not present or not a valid date.

TABLE 12. SEX COMPARISONS

	Sample Size	Sex Matches	Sex Mismatch	Not Comparable**
CONTROL* vs. MILPERCEN	9564	4217	6	5341
CONTROL vs. DMDC	9564	5618	9	3937
MILPERCEN vs. DMDC	9564	3938	64	5562
MILPERCEN vs. Vo-Tech	672	367	0	9197
DMDC vs. Vo-Tech	672	309	0	9255

*CONTROL is either from TRADOC or Vo-Tech.
**Not comparable means one or both sex data are missing or not a valid type

- Which data source is more reliable? (Accessing still other sources might shed some light on this.)

- If the SSN's are accurate, has DMDC been unable to properly respond to Battelle's data request? (DMDC recently installed a new computer system, and some of the problems encountered indirectly demonstrate staff inexperience.)

- Other data were also collected from both sources, do these data indicate similar problems?

The actions required to overcome the problems would be as follows. An attempt could be made to resolve the problems encountered and perform an analysis along the lines planned. More work on the data file could overcome or alleviate the discrepancies found thus far and permit an analysis of data. Certainly, the sample sizes are large enough. The comparative statistical analysis would be performed as specified in the Part I Technical Report using SPSS routines. Planned analysis using SQT scores would be eliminated.

Summary of Problems Encountered During Collection, Storage, and Management of Data

It is appropriate to examine, in summary, the problems encountered by the Battelle staff during collection, storage, and management of Vo-Tech Program and computerized soldier performance data and the implications for subsequent linking of ACES data and soldier performance data in the evaluation of program impact. These considerations will provide an opportunity to assess what was learned in the efforts to resolve these problems.

Vo-Tech Data Collection

The data recorded on the Form 669's regarding Vo-Tech course identification and content was not standardized either within Army posts or between posts. This lack of standardization in course identification and content makes the classification of soldier participants into groups with homogeneous educational experiences extremely difficult. Therefore, the formation of such groups for comparative analysis of program impact is experimentally specious.

The lack of standardization in data records is further compounded by the observed missing data on course follow-up. In a significant number of instances, data were not recorded on the Form 669's regarding course completion, course grade, and course drop-out. Hence, the extent of the educational experience for these soldier participants with missing

data could not be determined. This circumstance further complicates the classification of soldiers to the ACES program participation - non-participation categories for comparative analysis.

The further observation during manual data collection from the Form 669's of a spuriously low incidence of recorded data on participation in other ACES programs such as SOC, SOCAD, and Apprenticeship Training indicates potential probelms for evaluating impact across ACES programs. Significant incidence of missing data on participation in these other ACES programs may preclude, or make costly, obtaining satisfactory sample sizes for groups of soldier participants. The levels of precision and validity of participant versus nonparticipant comparisons may be less than desired to the extent they are affected by the missing data.

Computerized Data Collection

The development and implementation of procedures for processing and storage of data on the UNIVAC 1108 computer at Edgewood, Maryland did not progress as rapidly as planned because of the age and perceived "overworked" circumstance of the computer system. The EXEC 8 operating system was judged not to be as "up-to-date" as is possible. Delays were experienced in getting on to the system, seemingly unexpected "bugs" were encountered that were not explained by system documentation, and limitations on input-output file sizes hampered procedures development and subsequent processing. The random access files and COBOL routines used in the data storage and management procedures were not familiar to some of the UNIVAC 1108 operating staff. These staff members could not provide assistance when developmental and operational problems were encountered. For these reasons, it is anticipated that not infrequent operational problems would be encountered in conducting an ongoing ACES program impact analysis on the UNIVAC 1108 computer at Edgewood, Maryland. The assignment of a contractor employed, data processing and analysis specialist to the UNIVAC 1108 computer site could eliminate, or resolve, some of the anticipated problems. (The Battelle staff accessed the UNIVAC 1108 computer by means of telephone lines from Columbus, Ohio.)

Requesting and obtaining data from multiple, computerized data sources was hampered by the lack of direct contact between the Battelle staff and the person from each agency supplying the data. All questions concerning uncertainties in formats and specifications of both the request and the source had to be resolved by means of contacts through several intermediaries. This mode of contact caused delays in resolving these questions, introduced errors in interpretation, and degraded the value of feedback. It is recognized that this mode of contact is necessary for the initial cycle of contacts in order to legitimize the request for

data and to establish the authorization for supply of data. In subsequent contact cycles, however, the contacts should be made directly between requesting and source personnel, with notification and explanation of contacts sent to cognizant intermediaries. It is believed that this latter mode of contact is more efficient and effective in requesting and obtaining data from computerized sources.

The specific cause(s) for the perceived, low matching and/or retrieval rates on SSN's, birthdates, and sex among the TRADOC data tape, manually collected Vo-Tech Program data, DMDC data tape, and MILPERCEN data tape is (are) not known. It was anticipated that the matching and/or retrieval rates would be much higher than those achieved, e.g., it was expected that the match rate on SSN's between TRADOC and Vo-Tech data and DMDC data would approach 100 percent, but the achieved rates ranged from about 53 percent to about 76 percent. It is not known which data source is most reliable. The cause(s) of the low matching and/or retrieval rates must be isolated and the mechanism understood (perhaps, it (they) need not be corrected) before the data can be used for comparative statistical analysis of ACES program impact. The sample sizes of the program groups for which matches and/or retrievals were obtained are large enough to justify comparative analysis. Therefore, direct contacts between the personnel performing the comparative analysis and the TRADOC, DMDC, and MILPERCEN operating personnel would likely result in isolating and defining the mechanism(s) causing the low matching and/or retrieval rates. The need for and nature of appropriate corrective actions could then be determined. Then, the comparative statistical analysis of program impact could be performed consistent with the Part I Technical Report analysis plans. Of course, analysis involving SQT scores would have to be eliminated unless the appropriate SQT data were requested and obtained from the TSC.

APPENDIX A

DATA PROCESSING PROCEDURES IMPLEMENTED

APPENDIX A

DATA PROCESSING PROCEDURES IMPLEMENTED

```
1:        IDENTIFICATION DIVISION.
2:        PROGRAM-ID. INTIALIZ.
3:        INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
4:        DATE-WRITTEN. MAY 1980.
5:        REMARKS.   THE PURPOSE OF THIS PROGRAM IS
6:                      I  TO GENERATE ONE Z TYPE RECORD
7:                            INDEXED BY  0000000002
8:                        THE  Z RECORD CONTAINS THE FREQUENCIES
9:                        OF THE  A,B,T, AND Z TYPE RECORDS
10:                       AND IS FOUND  ON  ACES-MASTER-FILE
11:                     II TO ESTABLISH AN INTIAL  DATA BASE TO
12:                        ACCEPT VARIOUS INFORMATION AND BE
13:                        PLACED INTO THE DATA BASE  VIA  A  SPECIFIC
14:                        RECORD TYPE
15:                          A-TYPE
16:                          B-TYPE
17:                          T-TYPE
18:                          V-TYPE
19:                     III  TO GENERATE A STATUS REPORT
20:                          WITH FREQUENCY OF A,B,T,V, RECORDS.
21:       ENVIRONMENT DIVISION.
22:       CONFIGURATION SECTION.
23:       SOURCE-COMPUTER. UNIVAC-1108.
24:       OBJECT-COMPUTER. UNIVAC-1108.
25:       INPUT-OUTPUT SECTION.
26:       FILE-CONTROL.
27:           SELECT  ACES-MASTER-FILE ASSIGN TO MASS-STORAGE MASTER
28:                   ORGANIZATION IS INDEXED
29:                   ACCESS MODE IS RANDOM
30:                   FILE-LIMIT IS 20000
31:                   ACTUAL KEY IS MASTER-SEARCH-KEY.
32:           SELECT PRINTER1 ASSIGN TO PRINTER.
33:       DATA DIVISION.
34:       FILE SECTION.
35:       *
36:        FD  ACES-MASTER-FILE,
37:            LABEL RECORDS ARE STANDARD,
38:             RECORD CONTAINS 300 CHARACTERS,
39:             BLOCK CONTAINS 30 RECORDS.
40:       *
```

```
41:       01  MASTER-RECORD.
42:           03  SEARCH-KEY.
43:            05   SSN    PIC  9(9).
44:            05   RECORD-TYPE PIC X.
45:           03  DATA-AREA PIC  X(290).
46:       FD  PRINTER1
47:           LABEL RECORDS ARE OMITTED
48:                  DATA RECORD IS PRINT-LINE.
49:       01  PRINT-LINE.
50:           03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
51:           03 PRINT-DATA  PIC  X(121).
52:       WORKING-STORAGE SECTION.
53:       77  MASTER-SEARCH-KEY    PIC X(10).
54:      *
55:      *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
56:      *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
57:      *
58:       01  MACHINE-DATE-TIME.
59:           03 MACHINE-DATE.
60:             05 MM-DATE  PIC  XX.
61:             05 DD-DATE  PIC  XX.
62:             05 YY-DATE  PIC  XX.
63:           03 MACHINE-TIME.
64:             05 HOUR-DATE PIC XX.
65:             05 MIN-DATE  PIC XX.
66:             05 SEC-DATE  PIC XX.
67:      *
68:      *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
69:      *  FOR SORTING ON THE 6 FIELD CODE
70:      *
71:       01  SEQUENCED-DATE.
72:           03  YY-DATE   PIC  XX.
73:           03  MM-DATE   PIC  XX.
74:           03  DD-DATE   PIC  XX.
75:      *
76:      *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
77:      *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
78:      *  AND SOME RECORD TYPE (A,B,T, OR V)
79:      *
80:      *
81:      *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
82:      *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
83:      *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
84:      *  NUMERIC VALUE
85:      *
86:      *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
87:      *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
88:      *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
89:      *  INDEX FOR Z RECORD IS  000000000Z
90:      *
```

```
       01  Z-RECORD.
           03 SSN-TYPE.
             05  SSN  PIC 9(9).
             05  RECORD-TYPE PIC  X  VALUE 'Z'.
           03 INTIALIZED-DATE.
             05   INTIALIZED-YY  PIC  99.
             05   INTIALIZED-MM  PIC  99.
             05   INTIALIZED-DD  PIC  99.
           03 LAST-MODIFIED-DATE.
             05  LAST-MODIFIED-YY  PIC  99.
             05  LAST-MODIFIED-MM  PIC  99.
             05  LAST-MODIFIED-DD  PIC  99.
           03 RECORD-COUNTS.
             05   NUMBER-OF-A-RECORDS PIC  9(7).
             05   NUMBER-OF-B-RECORDS PIC  9(7).
             05   NUMBER-OF-T-RECORDS PIC  9(7).
             05   NUMBER-OF-V-RECORDS PIC  9(7).
             05   TOTAL-RECORDS       PIC  9(11).
       *
       *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
       *
        01  STATUS-REPORT.
           03 LINE-1.
             05  FILLER PIC X(40) VALUE SPACES.
             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
      -    ' FILE'.
           03 LINE-2.
             05  FILLER  PIC X(50) VALUE SPACES.
             05  FILLER  PIC X(8)  VALUE 'TIME   '.
             05  SHOW-TIME   PIC   X(6).
           03 LINE-3.
             05  FILLER  PIC X(50) VALUE SPACES.
             05  FILLER  PIC X(8)  VALUE  'DATE    '.
             05  SHOW-DATE   PIC  99/99/99.
           03 LINE-4.
             05  FILLER  PIC  X(23) VALUE SPACES.
             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
             05  FILLER  PIC  X(9) VALUE SPACES.
             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
             05  FILLER  PIC  X(23) VALUE   SPACES.
             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
           03 LINE-5.
             05  FILLER  PIC  X(32) VALUE SPACES.
             05  FILLER  PIC  X(15) VALUE  'A'.
             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
           03 LINE-6.
             05  FILLER  PIC  X(32)  VALUE SPACES.
             05  FILLER  PIC  X(15)  VALUE 'B'.
             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
```

```
141:           03 LINE-7.
142:             05  FILLER    PIC  X(32) VALUE SPACES.
143:             05  FILLER    PIC  X(15) VALUE   'T'.
144:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
145:             05  FILLER    PIC  X(25) VALUE SPACES.
146:             05  FILLER    PIC  X(20) VALUE  'DATE LAST MODIFIED '.
147:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
148:           03 LINE-8.
149:             05  FILLER  PIC  X(32) VALUE SPACES.
150:             05  FILLER  PIC  X(15) VALUE 'V'.
151:             05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
152:           03  LINE-9.
153:             05 FILLER PIC  X(46) VALUE SPACES.
154:             05 FILLER PIC  X(6)  VALUE '------'.
155:           03  LINE-10.
156:             05 FILLER  PIC  X(29) VALUE SPACES.
157:             05 FILLER  PIC  X(15) VALUE 'TOTAL'.
158:             05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
159:       PROCEDURE DIVISION.
160:       MAIN-LINE.
161:            PERFORM OPEN-FILE-WRITE-Z-RECORD.
162:           PERFORM  SET-UP-ACES-MASTER-FILE.
163:           PERFORM  SHUT-DOWN-ACES-MASTER-FILE.
164:           STOP RUN.
165:       *
166:       INTIALIZE-DATE-TIME.
167:       *  ********************************   *
168:       *   WHEN RUN ON A UNIVAC THE FOLLWING TWO STATEMENTS
169:       *   SHOULD BE DELETED THEN SUBSTITUTE THIS
170:           ACCEPT MACHINE-DATE-TIME FROM DATE-TIME.
171:       * ****************************************
172:       *
173:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
174:       *
175:       *
176:       OPEN-FILE-WRITE-Z-RECORD.
177:           PERFORM INTIALIZE-DATE-TIME.
178:           OPEN OUTPUT       ACES-MASTER-FILE,
179:                       PRINTER1.
180:           MOVE  ZEROES TO  SSN OF Z-RECORD, RECORD-COUNTS OF Z-RECORD,
181:                   SSN OF SEARCH-KEY.
182:           MOVE 'Z' TO RECORD-TYPE OF SEARCH-KEY.
183:           MOVE  SEQUENCED-DATE  TO  LAST-MODIFIED-DATE, INTIALIZED-DATE
184:                   OF  Z-RECORD.
185:            MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
186:            DISPLAY ' Z WRITTEN - ', Z-RECORD UPON PRINTER.
187:           WRITE  MASTER-RECORD FROM Z-RECORD,
188:                   INVALID KEY DISPLAY 'ERROR ON Z WRITE' UPON PRINTER.
189:           CLOSE        ACES-MASTER-FILE.
190:            DISPLAY '  ACES MASTER SHUT DOWN' UPON PRINTER.
```

```
191:      *
192:           OPEN INPUT ACES-MASTER-FILE.
193:           MOVE ZEROES TO SSN OF SEARCH-KEY.
194:           MOVE 'Z' TO RECORD-TYPE OF SEARCH-KEY.
195:          MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
196:           READ ACES-MASTER-FILE INTO Z-RECORD,
197:                     INVALID KEY DISPLAY 'Z READ ERROR' UPON PRINTER.
198:           DISPLAY Z-RECORD, 'TESTER' UPON PRINTER.
199:           CLOSE ACES-MASTER-FILE.
200:       SET-UP-ACES-MASTER-FILE.
201:      *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
202:      *    INVOLVING THE ACES-MASTER-FILE.
203:      *
204:           OPEN I-O        ACES-MASTER-FILE.
205:           MOVE  ZEROES  TO  SSN OF SEARCH-KEY.
206:           MOVE  'Z'  TO   RECORD-TYPE OF SEARCH-KEY.
207:           MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
208:           READ ACES-MASTER-FILE INTO  Z-RECORD,
209:                      INVALID KEY DISPLAY 'Z READ ERROR' UPON PRINTER.
210:           PERFORM  PRINT-STATUS-REPORT.
211:      *
212:       PRINT-STATUS-REPORT.
213:      *    MOVE  THE  DATA  OFF   Z-RECORD  TO  REPORT  PRINT  LINES
214:      *
215:           MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
216:                                  OF  STATUS-REPORT.
217:           MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
218:           MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
219:           MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
220:           MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
221:           MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
222:           MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
223:      *
224:      *   GET THE CORRECT TIME AND DATE
225:      *    PLACE  TIME, DATE  INTO  REPORT PAGE
226:      *
```

```
      227:           PERFORM INTIALIZE-DATE-TIME.
      228:           MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
      229:           MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
      230:       *   WRITE  THE STATUS REPORT
      231:       *   WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
      232:       *       HEAD-OF-FORM.
      233:           WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
      234:           WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
      235:           WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
      236:           WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
      237:           WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
      238:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
      239:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
      240:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
      241:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
      242:        SHUT-DOWN-ACES-MASTER-FILE.
      243:       *    A STATUS REPORT WILL BE GENERATED
      244:       *    A MODIFIED Z-RECORD WILL BE REWRITTEN
      245:       *    ACES-MASTEFILE WILL BE CLOSED
      246:           PERFORM PRINT-STATUS-REPORT.
      247:           PERFORM RE-WRITE-Z-RECORD.
      248:           CLOSE ACES-MASTER-FILE, PRINTER1.
      249:       *
      250:        RE-WRITE-Z-RECORD.
      251:           MOVE  SEQUENCED-DATE TO LAST-MODIFIED-DATE OF Z-RECORD.
      252:            MOVE ZEROES TO SSN OF SEARCH-KEY.
      253:            MOVE 'Z' TO RECORD-TYPE OF SEARCH-KEY.
      254:           MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
      255:           REWRITE MASTER-RECORD FROM Z-RECORD
      256:                 INVALID KEY  DISPLAY 'Z RECORD NOT WRITTEN'
      257:                       UPON PRINTER.
      258:         WRITE-EOF-MARKER.
      259:           MOVE SPACES TO MASTER-RECORD.
      260:           MOVE 999999999 TO SSN OF SEARCH-KEY.
      261:           MOVE 'Z' TO RECORD-TYPE OF SEARCH-KEY.
      262:           MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
      263:           WRITE MASTER-RECORD
      264:                   INVALID KEY DISPLAY 'EOF NOT WRITEN' UPON PRINTER.
      265:           MOVE SEARCH-KEY TO MASTER-SEARCH-KEY.
      266:       *  THIS CREATES AN END OF FILE MARKER RECORD
      267:       *  DENOTED BY RECORD KEY 9999999992
EOF:267
0:>
```

```
1:        IDENTIFICATION DIVISION.
2:        PROGRAM-ID. TRADOC.
3:        INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
4:        DATE-WRITTEN. MAY 1980.
5:        SECURITY. NO SECURITY CLEARANCE.
6:        REMARKS.   THE PURPOSE OF THIS PROGRAM IS
7:            PRODUCE TWO TYPES OF OUTPUT
8:                     I) THOSE SOLDIERS WHO HAVE BEEN ACCEPTED INTO
9:                         THE PROGRAM IE SELECTABLE-ABLE-TEST-SCORE
10:                        OF LESS THAN 50 OR ECL-PRETEST
11:                        OF LESS THAN 70
12:                   II) THOSE SOLDIERS WHO HAVE NOT BEEN ACCEPTED
13:                          INTO THE PROGRAM (WHICH SHOULD BE FEW)
14:                          AND HAVE HIGHER ECL PRE TEST SCORES
15:                          AND SELECT-ABLE-TEST-SCORES
16:       ENVIRONMENT DIVISION.
17:       CONFIGURATION SECTION.
18:       SOURCE-COMPUTER. UNIVAC-1108.
19:       OBJECT-COMPUTER. UNIVAC-1108.
20:       INPUT-OUTPUT SECTION.
21:       FILE-CONTROL.
22:           SELECT  ACES-MASTER-FILE ASSIGN TO MASS-STORAGE MASTER
23:                       ORGANIZATION IS INDEXED,
24:                   ACCESS MODE IS RANDOM
25:                   FILE-LIMIT IS 20000
26:                   ACTUAL KEY IS  SEARCH-KEY.
27:           SELECT PRINTER1 ASSIGN TO PRINTER.
28:           SELECT TRADOC ASSIGN TO CARD-READER TRDATA.
29:       DATA DIVISION.
30:       FILE SECTION.
31:       *
32:        FD  ACES-MASTER-FILE
33:           LABEL RECORDS ARE STANDARD,
34:            RECORD CONTAINS 300 CHARACTERS,
35:            BLOCK CONTAINS 30 RECORDS.
36:       *
37:        01  MASTER-RECORD.
38:           03  SEARCH-KEY.
39:            05   SSN   PIC  9(9).
40:            05   RECORD-TYPE PIC X.
41:           03  DATA-AREA PIC  X(290).
42:        FD   TRADOC
43:           LABEL RECORDS ARE STANDARD,
44:            RECORD CONTAINS 80 CHARACTERS.
45:        01  TRADOC-RECORD.
46:           02 TRADOC-RECORD-DUMMY.
47:                     05 LAST-NAME PIC X(12).
48:                     05 FIRST-INIT PIC XX.
49:                   05 SSN PIC 9(9).
```

```
50:          02 TRADOC-DATA-AREA.
51:                   05 SEX PIC X.
52:                   05 RACE  PIC X.
53:                       05 PRIMARY-LANGUAGE PIC X.
54:                       05 ESL PIC X.
55:                       05 EDUCATION-LEVEL PIC X.
56:                       05 MILITARY-COMPONENT PIC X.
57:                       05 MENTAL-CATEGORY PIC X.
58:                       05 MOS              PIC X(3).
59:                       05 SELECT-ABLE-TEST-SCORE PIC XX.
60:                       05 SELECTABLE-SUB-SCORE.
61:                          07 SS-1 PIC 99.
62:                             07 SS-2 PIC 99.
63:                              07 SS-3 PIC 99.
64:                              07 SS-4 PIC 99.
65:                              07 SS-5 PIC 99.
66:                              07 SS-6 PIC 99.
67:                              07 SS-7 PIC 99.
68:                              07 SS-8 PIC 99.
69:                              07 SS-9 PIC 99.
70:                              07 SS-10 PIC 99.
71:                              07 SS-11 PIC 99.
72:                              07 SS-12 PIC 99.
73:                              07 SS-13 PIC 99.
74:                                07 SS-14 PIC 99.
75:                              07 SS-15 PIC 99.
76:                            05 GRADE-LEVEL-CHANGE PIC X.
77:                            05 CHANGE-IN-GRADE PIC 99.
78:                            05 ECL-PRE-TEST PIC 99.
79:                            05 ECL-POST-TEST PIC 99.
80:                            05 DAYS-ENROLLED PIC XX.
81:                            05 SUCCESS    PIC X.
82:                            05 DISCHARGE PIC X.
83:                            05 INSTALATION-IDENT PIC 99.
84:                            05 MONTH  PIC X.
85:                            05 YEAR  PIC X.
86:          FD  PRINTER1
87:              LABEL RECORDS ARE OMITTED
88:                      DATA RECORD IS PRINT-LINE.
89:          01  PRINT-LINE.
90:              03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
91:              03 MESSAGE-1   PIC X(20).
92:              03 PRINT-DATA  PIC  X(101).
93:          WORKING-STORAGE SECTION.

94:          77  DUMMY-COUNTER PIC 9(5) VALUE 0.
95:          *
```

```
 77  R-MESSAGE PIC X(20) VALUE 'REJECTED- '.
* THESE ARE THE COUNTERS FOR THE RECORDS
 01  A-RECORD-COUNTERS.
     05 NEW-A-RECORDS-WRITTEN PIC 9(9) VALUE 0.
     05 OLD-A-RECORDS-REWRITTEN PIC 9(9) VALUE 0.
 01  B-RECORD-COUNTERS.
     05 NEW-B-RECORDS-WRITTEN PIC 9(9) VALUE 0.
     05 OLD-B-RECORDS-REWRITTEN PIC 9(9) VALUE 0.
*
 01  PATICIPANT-COUNTERS.
      05 BSEP-LIT-STATUS-1 PIC 9(9) VALUE 0.
      05 BSEP-LIT-STATUS-2 PIC 9(9) VALUE 0.
      05 BSEP-ESL-STATUS-1 PIC 9(9) VALUE 0.
      05 BSEP-ESL-STATUS-2 PIC 9(9) VALUE 0.
*  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
*  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
*
 01  MACHINE-DATE-TIME.
     03 MACHINE-DATE.
       05 MM-DATE  PIC  99.
       05 DD-DATE  PIC  99.
       05 YY-DATE  PIC  99.
     03 MACHINE-TIME.
       05 HOUR-DATE PIC 99.
       05 MIN-DATE  PIC 99.
       05 SEC-DATE  PIC 99.
*
*  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
*  FOR SORTING ON THE 6 FIELD CODE
*
 01  SEQUENCED-DATE.
     03  YY-DATE   PIC  99.
     03  MM-DATE   PIC  99.
     03  DD-DATE   PIC  99.
*
*  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
*  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
*  AND SOME RECORD TYPE (A,B,T, OR V)
*
*
*  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
*  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
*  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
*  NUMERIC VALUE
*
```

```
141:       01  A-RECORD.
142:           02 A-RECORD-DUMMY.
143:           03  SSN-TYPE .
144:             05  SSN PIC   9(9).
145:             05  RECORD-TYPE  PIC  X VALUE 'A'.
146:           03  MASTER-FLAGS.
147:             05  BSEP-LIT-STATUS PIC  9.
148:                  88  NO-B-RECORD VALUE 0.
149:                  88  BSEP-LIT-PARTIC       VALUE  1.
150:                  88  BSEP-LIT-NON-PARTIC       VALUE 2.
151:             05  BSEP-ESL-STATUS PIC  9.
152:                  88  NO-B-RECORD          VALUE 0.
153:                  88  BSEP-ESL-PARTIC      VALUE 1.
154:                  88  BSEP-ESL-NON-PARTIC VALUE 2.
155:             05  VO-TECH-STATUS PIC  9.
156:                  88  NO-T-RECORD          VALUE 0.
157:                  88  VO-TECH-PARTIC       VALUE 1.
158:                  88  VO-TECH-NON-PARTIC   VALUE 2.

158:                  88  VO-TECH-NON-PARTIC   VALUE 2.
159:             05  VEAP-STATUS PIC 9.
160:                  88  NO-V-RECORD              VALUE 0.
161:                  88  VEAP-PARTIC              VALUE 1.
162:                  88  VEAP-WITHDRAW-RETURN     VALUE 2.
163:                  88  VEAP-WITHDRAW-NO-RETURN  VALUE 3.
164:                  88  VEAP-NON-PARTIC          VALUE 4.
165:           03  A-RECORD-STATUS.
166:             05  MILPERCEN-FLAG PIC 9.
167:                  88  MILPERCEN-PRESENT        VALUE 1.
168:             05  DMDC-FLAG PIC  9.
169:                  88  DMDC-PRESENT             VALUE 1.
170:             05  TSC-FLAG  PIC  9.
171:                  88  TSC-PRESENT              VALUE 1.
172:             05  EREC-FLAG PIC  9.
173:                  88  EREC-PRESENT             VALUE 1.
174:             05  CREATE-DATE.
175:                  07 CREATE-YY  PIC 99.
176:                  07 CREATE-MM  PIC 99.
177:                  07 CREATE-DD  PIC 99.
178:             05  LAST-MOD-DATE.
179:                  07 LAST-MOD-YY PIC 99.
180:                  07 LAST-MOD-MM PIC 99.
181:                  07 LAST-MOD-DD PIC 99.
182:           03  CONTROL-INFORMATION.
183:             05  DOB.
184:                  07 DOB-YY  PIC  99.
185:                  07 DOB-MM  PIC  99.
186:                  07 DOB-DD  PIC  99.
187:             05  SEX  PIC  X.
188:                  88 MALE    VALUE 'M'.
189:                  88 FEMALE  VALUE 'F'.
```

```
190:           03  MILPERCEN-DATA.
191:             07 SEX PIC X.
192:             07 RACE PIC X.
193:             07 MARST PIC X.
194:             07 DOB PIC X(6).
195:             07 TERMS PIC X.
196:             07 ETSDT PIC X(6).
197:             07 EGPCD PIC  X.
198:             07 BPEDT PIC XXXX.
199:             07 PAYGR PIC X.
200:             07 DOR PIC X(6).
201:             07 AFQSC PIC XX.
202:             07 CIVED PIC X.
203:             07 PMOS PIC X(5).
204:             07 DMOS PIC X(5).
205:             07 TYPLA PIC XX.
206:             07 DATLA PIC X(6).
207:             07 PSVCI PIC X.
208:             07 EERWA PIC XXX.
209:             07 CMF PIC XX.
210:             07 AITDT PIC XXX.
211:             07 GTSCR PIC XXX.
212:             07 PQDES PIC X(4).

212:             07 PQDES PIC X(4).
213:             07 PSQDT PIC X(4).
214:             07 PQSCR PIC XXX.
215:             07 PQPER PIC XX.
216:               07  SMOS   PIC X(5).
217:               07  FILLER  PIC X(4).
218:           03   DMDC-DATA        PIC X(124).
219:           03   TSC-DATA         PIC X(56).
220:       *
221:       *
222:       *  CONSULT DOCUMENTATION FOR FILE LAYOUT
223:       *  ALL ARE REFERENCED  BY NNNNNNNNNB   WHERE N IS A
224:       *  NUMERIC VALUE
225:       *
226:        01   B-RECORD.
227:             02 B-RECORD-DUMMY.
228:             03  SSN-TYPE.
229:               05  SSN   PIC  9(9).
230:               05  RECORD-TYPE   PIC  X VALUE 'B'.
231:             03  B-RECORD-STATUS.
232:               05  CREATE-DATE.
233:                 07  CREATE-YY  PIC 99.
234:                 07  CREATE-MM  PIC 99.
235:                 07  CREATE-DD  PIC 99.
236:               05  MODIFY-DATE.
237:                 07  MODIFY-YY  PIC  99.
238:                 07  MODIFY-MM  PIC  99.
239:                 07  MODIFY-DD  PIC  99.
240:                05 LAST-NAME PIC X(12).
241:                05 FIRST-INIT PIC X.
```

```
242:           03 BSEP-DATA.
243:             05  SEX PIC 9.
244:              05 RACE PIC X.
245:             05 PRIMARY-LANGUAGE   PIC X.
246:             05 ESL                PIC X.
247:             05 EDUCATION-LEVEL   PIC X.
248:             05 MILITARY-COMPONENT PIC X.
249:             05 MENTAL-CATEGORY    PIC X.
250:             05 MOS                PIC X(3).
251:             05  SELECT-ABLE-TEST-SCORE    PIC  XX.
252:             05  SELECTABLE-SUB-SCORE.
253:                07  SS-1    PIC 99.
254:                07  SS-2    PIC 99.
255:                07  SS-3    PIC 99.
256:                07  SS-4    PIC 99.
257:                07  SS-5    PIC 99.
258:                07  SS-6    PIC 99.
259:                07  SS-7    PIC 99.
260:                07  SS-8    PIC 99.
261:                07  SS-9    PIC 99.
262:                07  SS-10   PIC 99.
263:                07  SS-11   PIC 99.
264:                07  SS-12   PIC 99.
265:                07  SS-13   PIC 99.

266:                07  SS-14   PIC 99.
267:                07  SS-15   PIC 99.
268:             05 GRADE-LEVEL-CHANGE  PIC  X.
269:             05 CHANGE-IN-GRADE     PIC  99.
270:             05 ECL-PRE-TEST        PIC  99.
271:             05 ECL-POST-TEST       PIC  99.
272:             05 DAYS-ENROLLED       PIC  XX.
273:             05 SUCCESS             PIC  X.
274:             05 DISCHARGE           PIC  X.
275:             05 INSTALLATION-IDENT                PIC  XX.
276:               05 MONTH PIC X.
277:                 05 YEAR PIC X.
278:      *
279:      *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
280:      *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
281:      *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
282:      *  INDEX FOR Z RECORD IS  OOOOOOOOOZ
283:      *
284:       01  Z-RECORD.
285:           03 SSN-TYPE.
286:             05  SSN  PIC 9(9).
287:             05  RECORD-TYPE PIC  X  VALUE 'Z'.
288:           03 INTIALIZED-DATE.
289:             05   INTIALIZED-YY  PIC  99.
290:             05   INTIALIZED-MM  PIC  99.
291:             05   INTIALIZED-DD  PIC  99.
```

```
292:           03 LAST-MODIFIED-DATE.
293:             05  LAST-MODIFIED-YY  PIC  99.
294:             05  LAST-MODIFIED-MM  PIC  99.
295:             05  LAST-MODIFIED-DD  PIC  99.
296:           03 RECORD-COUNTS.
297:             05   NUMBER-OF-A-RECORDS PIC  9(7).
298:             05   NUMBER-OF-B-RECORDS PIC  9(7).
299:             05   NUMBER-OF-T-RECORDS PIC  9(7).
300:             05   NUMBER-OF-V-RECORDS PIC  9(7).
301:             05   TOTAL-RECORDS       PIC  9(11).
302:       *
303:       *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
304:       *
305:        01  STATUS-REPORT.
306:           03 LINE-1.
307:             05  FILLER PIC X(20) VALUE SPACES.
308:             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
309:       -     ' FILE'.
310:           03 LINE-2.
311:             05  FILLER  PIC X(30) VALUE SPACES.
312:             05  FILLER  PIC X(8)  VALUE 'TIME   '.
313:             05  SHOW-TIME   PIC   X(6).
314:           03 LINE-3.
315:             05  FILLER  PIC X(30) VALUE SPACES.
316:             05  FILLER  PIC X(8)  VALUE  'DATE    '.
317:             05  SHOW-DATE   PIC  99/99/99.
318:           03 LINE-4.
319:             05  FILLER  PIC  X(3) VALUE SPACES.
320:             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.


321:             05  FILLER  PIC  X(9) VALUE SPACES.
322:             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
323:             05  FILLER  PIC  X(23) VALUE   SPACES.
324:             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
325:             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
326:           03 LINE-5.
327:             05  FILLER  PIC  X(12) VALUE SPACES.
328:             05  FILLER  PIC  X(15) VALUE  'A'.
329:             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
330:           03 LINE-6.
331:             05  FILLER  PIC  X(12)  VALUE SPACES.
332:             05  FILLER  PIC  X(15)  VALUE 'B'.
333:             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
334:           03 LINE-7.
335:             05  FILLER   PIC  X(12) VALUE SPACES.
336:             05  FILLER   PIC  X(15) VALUE   'T'.
337:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
338:             05  FILLER   PIC  X(25) VALUE SPACES.
339:             05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
340:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
```

```
341:            03 LINE-8.
342:              05  FILLER  PIC  X(12) VALUE SPACES.
343:              05  FILLER  PIC  X(15) VALUE 'V'.
344:              05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
345:            03  LINE-9.
346:              05 FILLER PIC  X(28) VALUE SPACES.
347:              05 FILLER PIC  X(6)  VALUE '------'.
348:            03  LINE-10.
349:              05 FILLER  PIC  X(9) VALUE SPACES.
350:              05 FILLER  PIC  X(15) VALUE 'TOTAL'.
351:              05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
352:        01  CREATED-A-RECORD-FLAG PIC  9.
353:            88 OLD-A-RECORD VALUE 0.
354:            88 NEW-A-RECORD VALUE 1.
355:        01  CREATED-B-RECORD-FLAG PIC 9.
356:            88 OLD-B-RECORD VALUE 0.
357:            88 NEW-B-RECORD VALUE 1.
358:        01  TRADOC-FILE-FLAG PIC 9.
359:               88 EOF-TRADOC-DATA-TAPE VALUE 1.
360:        01  RECORD-COUNTERS.
361:            03 TRADOC-RECORD-COUNTER PIC 9(9) VALUE 0.
362:            03 REJECTED-TRADOC-COUNTER PIC 9(9) VALUE 0.
363:            03 CREATED-A-COUNTER PIC 9(9) VALUE 0.
364:            03 CREATED-B-COUNTER PIC 9(9) VALUE 0.
365:        01  TRADOC-RECORD-FLAG PIC 9.
366:                  88 RECORD-REJECTED VALUE 1.
367:        PROCEDURE DIVISION.
368:        MAIN-LINE.
369:            OPEN OUTPUT PRINTER1.
370:            PERFORM SET-UP-ACES-MASTER-FILE.
371:            CLOSE ACES-MASTER-FILE.
372:            OPEN OUTPUT ACES-MASTER-FILE.
373:            PERFORM  SET-UP-TRADOC-DATA-TAPE.


374:            PERFORM  PROCESS-SOLDIER  THROUGH INPUT-TRADOC-RECORD
375:                                    UNTIL EOF-TRADOC-DATA-TAPE.
376:            CLOSE ACES-MASTER-FILE.
377:            OPEN I-O ACES-MASTER-FILE.
378:        * CHANGE THE 10 TIMES TO EOF MARKER AFTER TESTING JNH
379:            PERFORM SHUT-DOWN-ACES-MASTER-FILE.
380:             CLOSE TRADOC.
381:            STOP RUN.
382:         SET-UP-TRADOC-DATA-TAPE.
383:            OPEN INPUT TRADOC.
384:            CLOSE TRADOC.
385:            OPEN INPUT TRADOC.
386:            MOVE 0 TO TRADOC-FILE-FLAG.
387:            PERFORM INPUT-TRADOC-RECORD.
388:
389:        *  ***************************************************
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390:       SET-UP-ACES-MASTER-FILE.
391:      *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
392:      *    INVOLVING THE ACES-MASTER-FILE.
393:      *
394:           OPEN I-O        ACES-MASTER-FILE.
395:           MOVE  ZEROES  TO  SSN OF SEARCH-KEY.
396:           MOVE  'Z'  TO   RECORD-TYPE OF SEARCH-KEY.
397:           READ ACES-MASTER-FILE INTO  Z-RECORD,
398:                INVALID KEY DISPLAY '  NO Z RECORD',  Z-RECORD
399:                  UPON PRINTER.
400:           PERFORM  PRINT-STATUS-REPORT.
401:       PRINT-STATUS-REPORT.
402:      *    MOVE  THE  DATA  OFF   Z-RECORD  TO  REPORT  PRINT  LINES
403:      *
404:           MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
405:                                 OF  STATUS-REPORT.
406:           MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
407:           MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
408:           MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
409:           MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
410:           MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
411:           MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
412:      *
413:      *   GET THE CORRECT TIME AND DATE
414:      *    PLACE  TIME, DATE  INTO  REPORT PAGE
415:           PERFORM INTIALIZE-DATE-TIME.
416:           MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
417:           MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
418:      *    WRITE  THE STATUS REPORT
419:      *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
420:      *                          PAGE-TOP LINES.
421:           WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
422:           WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
423:           WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
424:           WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
425:           WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
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426:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
427:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
428:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
429:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
430:       *
431:        INTIALIZE-DATE-TIME.
432:       *
433:           ACCEPT MACHINE-DATE-TIME FROM DATE-TIME.
434:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
435:       *
436:       *
437:        SHUT-DOWN-ACES-MASTER-FILE.
438:       *     A STATUS REPORT WILL BE GENERATED
439:       *  ALL COUNTERS WILL BE UPDATED
440:       *     A MODIFIED Z-RECORD WILL BE REWRITTEN
441:       *     ACES-MASTEFILE WILL BE CLOSED
442:           PERFORM UPDATE-COUNTERS.
443:           PERFORM PRINT-STATUS-REPORT.
444:           PERFORM WRITE-Z-RECORD.
445:           CLOSE ACES-MASTER-FILE.
446:       *
447:        UPDATE-COUNTERS.
448:       * THE PURPOSE OF THIS ROUTINE IS TO UPDATE THE Z-RECORD
449:       * COUNTERS
450:           ADD NEW-A-RECORDS-WRITTEN TO NUMBER-OF-A-RECORDS.
451:           ADD NEW-B-RECORDS-WRITTEN TO NUMBER-OF-B-RECORDS.
452:           DISPLAY ' ', NEW-A-RECORDS-WRITTEN, 'NEW A RECS'
453:                   UPON PRINTER.
454:           DISPLAY ' ', OLD-A-RECORDS-REWRITTEN, 'OLD A RECS'
455:                   UPON PRINTER.
456:           DISPLAY ' ', NEW-B-RECORDS-WRITTEN, 'NEW B RECS'
457:                   UPON PRINTER.
458:           DISPLAY ' ', OLD-B-RECORDS-REWRITTEN, 'OLD B RECS'
459:                   UPON PRINTER.
460:           DISPLAY ' ', BSEP-LIT-STATUS-1, 'BSEP LIT STATUS 1'
461:                   UPON PRINTER.
462:           DISPLAY ' ', BSEP-LIT-STATUS-2, 'BSEP LIT STATUS 2'
463:                   UPON PRINTER.
464:           DISPLAY ' ', BSEP-ESL-STATUS-1, 'BSEP ESL STATUS 1'
465:                   UPON PRINTER.
466:           DISPLAY ' ', BSEP-ESL-STATUS-2, 'BSEP ESL STATUS 2'
467:                   UPON PRINTER.
468:            MOVE 0 TO TOTAL-RECORDS.
469:            ADD NUMBER-OF-A-RECORDS TO TOTAL-RECORDS.
470:            ADD NUMBER-OF-B-RECORDS TO TOTAL-RECORDS.
471:           ADD NUMBER-OF-T-RECORDS TO TOTAL-RECORDS.
472:           ADD NUMBER-OF-V-RECORDS TO TOTAL-RECORDS.
473:        WRITE-Z-RECORD.
474:           MOVE  SEQUENCED-DATE TO LAST-MODIFIED-DATE OF Z-RECORD.
475:           MOVE Z-RECORD TO MASTER-RECORD.
```

```
476:           REWRITE MASTER-RECORD
477:                 INVALID KEY  DISPLAY 'Z RECORD NOT WRITTEN'
478:                   UPON PRINTER.
479:       * ***************************************************************
480:       *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR TRADOC
481:       *    FILE PROCESSING
482:       *   ***************************************************************
483:       * THIS IS THE TOP OF THE TRADOC PROCESSING LOOP
484:       *  IT WILL BE REPEATED A NUMER OF TIMES EQUAL TO THE
485:       *  NUMBER OF TRADOC DATA RECORDS
486:       *  ***********************************************************
487:        PROCESS-SOLDIER.
488:       * HERE WE WILL CHECK TO SEE IF THE TRADOC RECORD MEETS MINIMUM
489:       * REQUIREMENTS OTHERWISE WE WILL REJECT THE RECORD
490:           PERFORM EXAMINE-TRADOC-RECORD.
491:       *
492:       * NEXT WE WILL SEE IF THERE IS AN A-RECORD ON THIS SOLDIER AND
493:       * DETERMINE BY MEANS OF A SEX COMPARISON IF THE TWO ARE THE
494:       * SAME IE TRADOC INPUT AND THE A-RECORD
495:           IF NOT RECORD-REJECTED
496:                    PERFORM FIND-CREATE-A-RECORD.
497:       *
498:       * NOW IF WE HAVE FOUND-VERIFIED THE A-RECORD OR CREATED IT
499:       * WE WILL TRY TO FIND  OR CREATE THE B-RECORD
500:       * NOTE THAT IF THE A-RECORD IS VERIFIED THE B-RECORD IS
501:       * IPSO FACTO VERIFIED
502:           IF NOT RECORD-REJECTED,
503:                  PERFORM FIND-CREATE-B-RECORD,
504:                    PERFORM EXAMINE-B-RECORD,
505:                      PERFORM REWRITE-WRITE-A-RECORD,
506:                      PERFORM REWRITE-WRITE-B-RECORD.
507:        INPUT-TRADOC-RECORD.
508:              READ TRADOC AT END MOVE 1 TO TRADOC-FILE-FLAG,
509:                             SUBTRACT 1 FROM TRADOC-RECORD-COUNTER.
510:              ADD 1 TO TRADOC-RECORD-COUNTER.
511:              ADD 1 TO DUMMY-COUNTER.
512:             IF DUMMY-COUNTER EQUALS 100
513:                        MOVE ZEROS TO DUMMY-COUNTER,
514:                        DISPLAY TRADOC-RECORD-COUNTER, ' '
515:                                SSN OF TRADOC-RECORD UPON PRINTER.
516:       *  ***********************************************************
517:       *  THIS IS THE BOTTOM OF THE LOOP FOR TRADOC PROCESSING
518:       *  ***********************************************************
```

```
519:        EXAMINE-TRADOC-RECORD.

520:              MOVE 0 TO TRADOC-RECORD-FLAG.
521:              IF SSN OF TRADOC-RECORD NOT NUMERIC
522:                    MOVE 1 TO TRADOC-RECORD-FLAG.
523:              IF SELECT-ABLE-TEST-SCORE OF TRADOC-RECORD
524:               EQUALS 'CR' MOVE 1 TO TRADOC-RECORD-FLAG.
525:              IF RECORD-REJECTED
526:                       ADD 1 TO REJECTED-TRADOC-COUNTER,
527:                  MOVE SPACES TO PRINT-LINE
528:                           MOVE   R-MESSAGE TO MESSAGE-1,
529:                                MOVE TRADOC-RECORD TO PRINT-DATA,
530:                         WRITE PRINT-LINE AFTER 1 LINES.
531:        FIND-CREATE-A-RECORD.
532:            MOVE 0 TO CREATED-A-RECORD-FLAG.
533:            MOVE SSN OF TRADOC-RECORD TO SSN OF SEARCH-KEY.
534:            MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
535:        *   READ ACES-MASTER-FILE INTO A-RECORD
536:        *        INVALID KEY PERFORM CREATE-A-RECORD-FROM-TRADOC.
537:                 PERFORM CREATE-A-RECORD-FROM-TRADOC.
538:            IF NOT NEW-A-RECORD
539:                   PERFORM VERIFY-A-RECORD.
540:        VERIFY-A-RECORD.
541:            MOVE 0 TO TRADOC-RECORD-FLAG.
542:            IF SEX OF TRADOC-RECORD
543:                        NOT EQUAL SEX OF A-RECORD
544:                           DISPLAY 'BAD MATCH ON TRADOC RECORD A EXISTS '
545:                             UPON PRINTER,
546:                           MOVE 1 TO TRADOC-RECORD-FLAG.
547:        FIND-CREATE-B-RECORD.
548:            MOVE 0 TO CREATED-B-RECORD-FLAG.
549:            MOVE 'B' TO RECORD-TYPE OF SEARCH-KEY.
550:        *   READ ACES-MASTER-FILE INTO B-RECORD,
551:        *        INVALID KEY PERFORM CREATE-A-RECORD-FROM-TRADOC.
552:                 PERFORM CREATE-B-RECORD-FROM-TRADOC.
553:        CREATE-A-RECORD-FROM-TRADOC.
554:            MOVE 1 TO CREATED-A-RECORD-FLAG.
555:            PERFORM BLANK-OUT-A-RECORD.
556:            MOVE SSN OF TRADOC-RECORD TO SSN OF A-RECORD.
557:            ADD 1 TO CREATED-A-COUNTER.
558:            MOVE SEQUENCED-DATE TO CREATE-DATE OF A-RECORD,
559:                                           LAST-MOD-DATE OF A-RECORD.
560:             MOVE 999999 TO DOB OF CONTROL-INFORMATION.
561:             MOVE SEX OF TRADOC-RECORD TO SEX OF CONTROL-INFORMATION.
```

```
562:        CREATE-B-RECORD-FROM-TRADOC.
563:            MOVE 1 TO CREATED-B-RECORD-FLAG.
564:            PERFORM BLANK-OUT-B-RECORD.
565:            MOVE TRADOC-DATA-AREA TO BSEP-DATA.
566:            MOVE SSN OF TRADOC-RECORD TO SSN OF B-RECORD.
567:            ADD 1 TO CREATED-B-COUNTER.
568:            MOVE SEQUENCED-DATE TO CREATE-DATE OF B-RECORD.
569:        EXAMINE-B-RECORD.
570:             IF SELECT-ABLE-TEST-SCORE OF TRADOC-RECORD NOT EQUAL 'ER'
571:                IF( DAYS-ENROLLED OF B-RECORD EQUALS '--' OR
572:                  DAYS-ENROLLED OF B-RECORD EQUALS 'OO' OR
573:                  DAYS-ENROLLED OF B-RECORD EQUALS ' -' OR
574:                  DAYS-ENROLLED OF B-RECORD EQUALS '-O')

574:                  DAYS-ENROLLED OF B-RECORD EQUALS '-O')
575:                    MOVE 2 TO BSEP-LIT-STATUS OF A-RECORD
576:                   ADD 1 TO BSEP-LIT-STATUS-2,
577:                ELSE
578:                   ADD 1 TO BSEP-LIT-STATUS-1,
579:                    MOVE 1 TO BSEP-LIT-STATUS OF A-RECORD
580:             ELSE
581:               IF ESL OF TRADOC-RECORD EQUALS 'E'
582:                    MOVE 1 TO BSEP-ESL-STATUS OF A-RECORD
583:                       ADD 1 TO BSEP-ESL-STATUS-1,
584:                        ELSE
585:                     ADD 1 TO BSEP-ESL-STATUS-2,
586:                    MOVE 2 TO BSEP-ESL-STATUS OF A-RECORD.
587:             MOVE SEX OF B-RECORD TO SEX OF CONTROL-INFORMATION.
588:        REWRITE-WRITE-A-RECORD.
589:             MOVE SSN OF TRADOC-RECORD TO SSN OF SEARCH-KEY.
590:            MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
591:            MOVE SEQUENCED-DATE TO LAST-MOD-DATE OF A-RECORD.
592:            IF OLD-A-RECORD
593:               ADD 1 TO OLD-A-RECORDS-REWRITTEN,
594:                    REWRITE MASTER-RECORD FROM A-RECORD
595:                        INVALID KEY DISPLAY
596:                           ' INVALID ATTEMPT REWRI *A* REC - ',
597:                           SSN OF TRADOC-RECORD UPON PRINTER,
598:                     SUBTRACT 1 FROM OLD-A-RECORDS-REWRITTEN,
599:            ELSE
600:                 ADD 1 TO NEW-A-RECORDS-WRITTEN,
601:                    WRITE MASTER-RECORD FROM A-RECORD
602:                        INVALID KEY DISPLAY
603:                           ' INVALID ATTEMPT WRI *A* REC - ',
604:                           SSN OF TRADOC-RECORD UPON PRINTER,
605:                         SUBTRACT 1 FROM NEW-A-RECORDS-WRITTEN.
```

```
606:        REWRITE-WRITE-B-RECORD.
607:             MOVE SSN OF TRADOC-RECORD TO SSN OF SEARCH-KEY.
608:             MOVE SEQUENCED-DATE TO MODIFY-DATE OF B-RECORD.
609:            MOVE 'B' TO RECORD-TYPE OF SEARCH-KEY.
610:            IF OLD-B-RECORD
611:              ADD 1 TO OLD-B-RECORDS-REWRITTEN
612:                    REWRITE MASTER-RECORD FROM B-RECORD
613:                        INVALID KEY DISPLAY
614:                            ' INVALID ATTEMPT REWRI *B* REC - ',
615:                           SSN OF TRADOC-RECORD UPON PRINTER,
616:                     SUBTRACT 1 FROM OLD-B-RECORDS-REWRITTEN,
617:            ELSE
618:                ADD 1 TO NEW-B-RECORDS-WRITTEN,
619:                    WRITE MASTER-RECORD FROM B-RECORD
620:                        INVALID KEY DISPLAY
621:                            ' INVALID ATTEMPT WRI *B* REC - ',
622:                           SSN OF TRADOC-RECORD UPON PRINTER,
623:                      SUBTRACT 1 FROM NEW-B-RECORDS-WRITTEN.
624:        BLANK-OUT-A-RECORD.
625:            MOVE SPACES TO MILPERCEN-DATA OF A-RECORD.
626:            MOVE 0 TO MASTER-FLAGS OF A-RECORD,
627:                    A-RECORD-STATUS.


628:        BLANK-OUT-B-RECORD.
629:            MOVE SPACES TO BSEP-DATA OF B-RECORD.
630:            MOVE 0 TO B-RECORD-STATUS.
EOF:630 SCAN:2
0:>
```

```
1:        IDENTIFICATION DIVISION.
2:        PROGRAM-ID. VOTECH.
3:        INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
4:        DATE-WRITTEN. MAY 1980.
5:        SECURITY. NO SECURITY CLEARANCE.
6:        ENVIRONMENT DIVISION.
7:        CONFIGURATION SECTION.
8:        SOURCE-COMPUTER. UNIVAC-1108.
9:        OBJECT-COMPUTER. UNIVAC-1108.
10:       INPUT-OUTPUT SECTION.
11:       FILE-CONTROL.
12:           SELECT   ACES-MASTER-FILE ASSIGN TO
13:                   MASS-STORAGE MASTER,
14:                   ACCESS MODE IS RANDOM
15:                         ORGANIZATION IS INDEXED,
16:                   FILE-LIMIT IS 20000
17:                   ACTUAL KEY IS  SEARCH-KEY,
18:                   PROCESSING MODE IS RANDOM.
19:       *
20:           SELECT PRINTER1 ASSIGN TO PRINTER.
21:       *
22:            SELECT RAW-VOTECH-FILE ASSIGN TO
23:                                                  CARD-READER POSTS.
24:           SELECT VOTECH-FILE ASSIGN TO CARD-READER VSRT.
25:       *
26:       *
27:           SELECT TEMP-SORT ASSIGN TO
28:                       MASS-STORAGE XA.
29:       *
30:        DATA DIVISION.
31:        FILE SECTION.
32:       *
33:        FD  ACES-MASTER-FILE
34:           LABEL RECORDS ARE STANDARD,
35:            RECORD CONTAINS 300 CHARACTERS,
36:            BLOCK CONTAINS 30 RECORDS.
37:       *
38:        01  MASTER-RECORD.
39:           03  SEARCH-KEY.
40:            05   SSN   PIC  9(9).
41:            05   RECORD-TYPE PIC X.
42:           03  DATA-AREA PIC  X(290).
43:       *
44:       *
45:        FD  VOTECH-FILE
46:            LABEL RECORDS ARE STANDARD,
47:            RECORD CONTAINS 80 CHARACTERS.
48:        01  RAW-INPUT-CARD PIC X(80).
49:       *
50:       *
```

```
51:       SD  TEMP-SORT
52:           DATA RECORD IS SORT-CARD.
53:       01   SORT-CARD.
54:            03 SSN PIC 9(9).
55:            03 FILLER PIC X(70).
56:            03 CARD-CODE PIC 9.
57:      *
58:      *
59:      *
60:      *
61:       FD  RAW-VOTECH-FILE
62:           LABEL RECORDS ARE STANDARD,
63:              RECORD CONTAINS 80 CHARACTERS.
64:        01 RAW-VOTECH-RECORD PIC X(80).
65:      *
66:       FD  PRINTER1
67:           LABEL RECORDS ARE OMITTED
68:                  DATA RECORD IS PRINT-LINE.
69:       01  PRINT-LINE.
70:           03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
71:           03 PRINT-DATA  PIC  X(121).
72:       WORKING-STORAGE SECTION.
73:      *
74:      *
75:       77  OLD-SSN PIC 9(9).
76:       77  DIFFERENCE PIC S9(6).
77:        77 DUMMY-COUNTER PIC 9(11) VALUE 0.
78:      *
79:       01  ACES-RECORD-COUNTERS.
80:                 05 NEW-A-RECORDS-WRITTEN PIC 9(5) VALUE 0.
81:                 05 OLD-A-RECORDS-REWRITTEN PIC 9(5) VALUE 0.
82:                 05 NEW-T-RECORDS-WRITTEN PIC 9(5) VALUE 0.
83:                 05 OLD-T-RECORDS-REWRITTEN PIC 9(5) VALUE 0.
84:      *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
85:      *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
86:       01  MACHINE-DATE-TIME.
87:           03 MACHINE-DATE.
88:             05 MM-DATE PIC 99.
89:             05 DD-DATE  PIC  99.
90:             05 YY-DATE  PIC  99.
91:           03 MACHINE-TIME.
92:             05 HOUR-DATE PIC 99.
93:             05 MIN-DATE  PIC 99.
94:             05 SEC-DATE  PIC 99.
95:      *
96:      *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
97:      *  FOR SORTING ON THE 6 FIELD CODE
98:      *
```

```
 99:        01  SEQUENCED-DATE.
100:            03  YY-DATE   PIC  99.
101:            03  MM-DATE   PIC  99.
102:            03  DD-DATE   PIC  99.
103:       *
104:       *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
105:       *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
106:       *  AND SOME RECORD TYPE (A,B,T, OR V)
107:       *
108:       *
109:        01  DUMMY .
110:                  05 SSN PIC 9(9).
111:                  05 RECORD-TYPE PIC X.
112:       *
113:       * THE INPUT CARD IS THE COMMON RECORD
114:       * FORMAT OF ALL OF THE VOTECH INPUT CARDS
115:       * IE THERE COMMON FIELDS (SSN,CARD-CODE)
116:       *
117:        01  INPUT-CARD.
118:           03 SSN  PIC 9(9).
119:           03 DATA-AREA.
120:                05 FILLER PIC X(4).
121:                05 DOP PIC 9(6).
122:                05 FILLER PIC X(60).
123:           03 CARD-CODE PIC 9.
124:                  88 FIRST-CARD VALUE 1.
125:                  88 SECOND-CARD VALUE 2.
126:                  88 THIRD-CARD VALUE 3.
127:                  88 FOURTH-CARD VALUE 4.
128:       *
129:       *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
130:       *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
131:       *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
132:       *  NUMERIC VALUE
133:       *
134:        01  A-RECORD.
135:            02 A-RECORD-DUMMY.
136:            03  SSN-TYPE .
137:              05  SSN PIC   9(9).
138:              05  RECORD-TYPE  PIC  X VALUE 'A'.
139:            03  MASTER-FLAGS.
140:              05  BSEP-LIT-STATUS PIC  9.
141:                   88  NO-B-RECORD VALUE 0.
142:                   88  BSEP-LIT-PARTIC       VALUE  1.
143:                   88  BSEP-LIT-NON-PARTIC       VALUE 2.
144:              05  BSEP-ESL-STATUS PIC  9.
145:                   88  NO-B-RECORD         VALUE 0.
146:                   88  BSEP-ESL-PARTIC     VALUE 1.
147:                   88  BSEP-ESL-NON-PARTIC VALUE 2.
```

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148:            05  VO-TECH-STATUS PIC  9.
149:                 88  NO-T-RECORD          VALUE 0.
150:                 88  VO-TECH-PARTIC       VALUE 1.
151:                 88  VO-TECH-NON-PARTIC   VALUE 2.
152:            05  VEAP-STATUS PIC 9.
153:                 88  NO-V-RECORD                VALUE 0.
154:                 88  VEAP-PARTIC                VALUE 1.
155:                 88  VEAP-WITHDRAW-RETURN       VALUE 2.
156:                 88  VEAP-WITHDRAW-NO-RETURN    VALUE 3.
157:                 88  VEAP-NON-PARTIC            VALUE 4.
158:          03  A-RECORD-STATUS.
159:            05  MILPERCEN-FLAG PIC 9.
160:                 88  MILPERCEN-PRESENT          VALUE 1.
161:            05  DMDC-FLAG PIC  9.
162:                 88  DMDC-PRESENT               VALUE 1.
163:            05  TSC-FLAG  PIC  9.
164:                 88  TSC-PRESENT                VALUE 1.
165:            05  EREC-FLAG PIC  9.
166:                 88  EREC-PRESENT               VALUE 1.
167:            05  CREATE-DATE.
168:                 07 CREATE-YY  PIC 99.
169:                 07 CREATE-MM  PIC 99.
170:                 07 CREATE-DD  PIC 99.
171:            05  LAST-MOD-DATE.
172:                 07 LAST-MOD-YY PIC 99.
173:                 07 LAST-MOD-MM PIC 99.
174:                 07 LAST-MOD-DD PIC 99.
175:          03  CONTROL-INFORMATION.
176:            05  DOB.
177:                 07 DOB-YY  PIC  99.
178:                 07 DOB-MM  PIC  99.
179:                 07 DOB-DD  PIC  99.
180:            05  SEX  PIC  X.
181:                 88 MALE    VALUE 'M'.
182:                 88 FEMALE  VALUE 'F'.
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183:           03  MILPERCEN-DATA.
184:             07 SEX PIC X.
185:             07 RACE PIC X.
186:             07 MARST PIC X.
187:             07 DOB PIC X(6).
188:             07 TERMS PIC X.
189:             07 ETSDT PIC X(6).
190:             07 EGPCD PIC  X.
191:             07 BPEDT PIC XXXX.
192:             07 PAYGR PIC X.
193:             07 DOR PIC X(6).
194:             07 AFQSC PIC XX.
195:             07 CIVED PIC X.
196:             07 PMOS PIC X(5).
197:             07 DMOS PIC X(5).
198:             07 TYPLA PIC XX.
199:             07 DATLA PIC X(6).
200:             07 PSVCI PIC X.
201:             07 EERWA PIC XXX.
202:             07 CMF PIC XX.
203:             07 AITDT PIC XXX.
204:             07 GTSCR PIC XXX.
205:             07 PQDES PIC X(4).
206:             07 PSQDT PIC X(4).
207:             07 PQSCR PIC XXX.
208:             07 PQPER PIC XX.
209:               07  SMOS   PIC X(5).
210:               07  FILLER  PIC X(4).
211:           03   DMDC-DATA        PIC X(124).
212:           03   TSC-DATA         PIC X(56).
213:       *
214:       *
215:       *  CONSULT DOCUMENTATION FOR FILE LAYOUT
216:       *  ALL ARE REFERENCED  BY NNNNNNNNNB   WHERE N IS A
217:       *  NUMERIC VALUE
218:       *
219:       *
220:       *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
221:       *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
222:       *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
223:       *  INDEX FOR Z RECORD IS  000000000Z
224:       *
225:        01  Z-RECORD.
226:           03 SSN-TYPE.
227:             05  SSN  PIC 9(9).
228:             05  RECORD-TYPE PIC  X  VALUE 'Z'.
229:           03 INTIALIZED-DATE.
230:             05   INTIALIZED-YY  PIC  99.
231:             05   INTIALIZED-MM  PIC  99.
232:             05   INTIALIZED-DD  PIC  99.
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233:            03 LAST-MODIFIED-DATE.
234:              05  LAST-MODIFIED-YY  PIC  99.
235:              05  LAST-MODIFIED-MM  PIC  99.
236:              05  LAST-MODIFIED-DD  PIC  99.
237:            03 RECORD-COUNTS.
238:              05   NUMBER-OF-A-RECORDS PIC  9(7).
239:              05   NUMBER-OF-B-RECORDS PIC  9(7).
240:              05   NUMBER-OF-T-RECORDS PIC  9(7).
241:              05   NUMBER-OF-V-RECORDS PIC  9(7).
242:              05   TOTAL-RECORDS       PIC  9(11).
243:         *
244:         *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
245:         *
246:          01  STATUS-REPORT.
247:            03 LINE-1.
248:              05  FILLER PIC X(20) VALUE SPACES.
249:              05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
250:         -    ' FILE'.
251:            03 LINE-2.
252:              05  FILLER  PIC X(30) VALUE SPACES.
253:              05  FILLER  PIC X(8)  VALUE 'TIME   '.
254:              05  SHOW-TIME   PIC   X(6).
255:            03 LINE-3.
256:              05  FILLER  PIC X(30) VALUE SPACES.
257:              05  FILLER  PIC X(8)  VALUE  'DATE    '.
258:              05  SHOW-DATE   PIC  99/99/99.
259:            03 LINE-4.
260:              05  FILLER  PIC  X(3) VALUE SPACES.
261:              05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
262:              05  FILLER  PIC  X(9) VALUE SPACES.
263:              05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
264:              05  FILLER  PIC  X(23) VALUE   SPACES.
265:              05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
266:              05  SHOW-INTIALIZED-DATE PIC  99/99/99.
267:            03 LINE-5.
268:              05  FILLER  PIC  X(12) VALUE SPACES.
269:              05  FILLER  PIC  X(15) VALUE  'A'.
270:              05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
271:            03 LINE-6.
272:              05  FILLER  PIC  X(12)  VALUE SPACES.
273:              05  FILLER  PIC  X(15)  VALUE 'B'.
274:              05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
275:            03 LINE-7.
276:              05  FILLER   PIC  X(12) VALUE SPACES.
277:              05  FILLER   PIC  X(15) VALUE   'T'.
278:              05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
279:              05  FILLER   PIC  X(25) VALUE SPACES.
280:              05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
281:              05  SHOW-MODIFY-DATE    PIC  99/99/99.
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282:            03 LINE-8.
283:              05  FILLER  PIC  X(12) VALUE SPACES.
284:              05  FILLER  PIC  X(15) VALUE 'V'.
285:              05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
286:            03  LINE-9.
287:              05 FILLER PIC  X(28) VALUE SPACES.
288:              05 FILLER PIC  X(6)  VALUE '------'.
289:            03  LINE-10.
290:              05 FILLER  PIC  X(9) VALUE SPACES.
291:              05 FILLER  PIC  X(15) VALUE 'TOTAL'.
292:              05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
293:        01  CREATED-A-RECORD-FLAG PIC  9.
294:            88 OLD-A-RECORD VALUE 0.
295:            88 NEW-A-RECORD VALUE 1.
296:            88 REJECTED-A-RECORD VALUE 2.
297:        01  CREATED-T-RECORD-FLAG PIC 9.
298:            88 OLD-T-RECORD VALUE 0.
299:            88 NEW-T-RECORD VALUE 1.
300:            88 REJECTED-VOTECH-DATA VALUE 2.
301:        01  VOTECH-FILE-FLAG PIC 9.
302:               88 EOF-VOTECH-FILE VALUE 1.
303:        01  RECORD-COUNTERS.
304:            03 VOTECH-RECORD-COUNTER PIC 9(9) VALUE 0.
305:             03 CARD-IMAGES-READ PIC 9(9) VALUE 0.
306:              03 IMPROPER-MATCH-DOB PIC 9(9) VALUE 0.
307:              03 IMPROPER-MATCH-SEX PIC 9(9) VALUE 0.
308:            03 SOLDIERS-IN-RAW-DATA-FILE PIC 9(9) VALUE 0.
309:            03 REJECTED-VOTECH-COUNTER PIC 9(9) VALUE 0.
310:            03 CREATED-A-COUNTER PIC 9(9) VALUE 0.
311:            03 CREATED-T-COUNTER PIC 9(9) VALUE 0.
312:             03 UPDATED-T-RECORD-COUNTER PIC 9(9) VALUE 0.
313:        01  VOTECH-INPUT-DATA.
314:            03 CARD-1.
315:              05 SSN PIC 9(9).
316:              05 GT-SCORE PIC 999.
317:              05 EDU-LEVEL PIC X.
318:              05 DOB PIC 9(6).
319:              05 RACE PIC X.
320:              05 SEX PIC X.
321:              05 GRADE PIC XX.
322:              05 APPT-DATE-E5 PIC 9(6).
323:              05 APPT-DATE-E6 PIC 9(6).
324:              05 BASIC-ENLIST-SERV-DATE PIC 9(6).
325:              05 DATE-FIRST-MOS PIC X(5).
326:              05 DUTY-MOS PIC X(5).
327:              05 PREVIOUS-ACTIVE-MILITARY-SERV PIC 9(6).
328:              05 AGREEMENT-DATE PIC 9(6).
329:              05 EER-EERWA-SCORE PIC 9(3).
330:                05 EER-EERWA-FORM PIC 9.
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331:              05 PROMOTION-POINTS PIC 9(4).
332:              05 DISCIPLINARY-ACTIONS PIC 9.
333:              05 DISCIPLINARY-ACTIONS-2627 PIC 9.
334:              05 FILLER PIC XX.
335:              05 CARDS-PER-CASE PIC 9.
336:              05 TWO-O-1-COMPLETE PIC 9.
337:              05 POST-BASE-ED-CENTER PIC X.
338:              05 CARD-CODE PIC 9.
339:            03 CARD-2.
340:               05 SSN PIC 9(9).
341:               05 ETS PIC 9(6).
342:               05 VOTECH-PARTICIP PIC 9.
343:               05 VOTECH-PARTICIPANT-TYPE.
344:                 07 AUTO    PIC 9.
345:                 07 DIESEL   PIC 9.
346:                 07 WELDING PIC 9.
347:                 07 ELECTRONICS PIC 9.
348:                07 CONSTRUCTION PIC 9.
349:               05 OTHER-ACES-PARTICIPANT.
350:                 07 NONE PIC 9.
351:                 07 BSEP-I-II-ESL PIC  9.
352:                 07 HSCP  PIC 9.
353:                 07 SOCAD-SOC PIC 9.
354:                 07 APPRENTICISHIP PIC 9.
355:                 07 MOS-REFRESHER PIC 9.
356:                 07 HEAD-GATE-ESL PIC 9.
357:                07 VEAP PIC 9.
358:               05 VOTECH-COURSES.
359:                 07 COURSE-1.
360:                   09 COURSE-CODE PIC 999.
361:                   09 BASE PIC 999.
362:                   09 HOURS PIC 999.
363:                   09 FINISHED PIC 9.
364:                 07 COURSE-2.
365:                   09 COURSE-CODE PIC 999.
366:                   09 BASE PIC 999.
367:                   09 HOURS PIC 999.
368:                   09 FINISHED PIC 9.
369:                 07 COURSE-3.
370:                   09 COURSE-CODE PIC 999.
371:                    09 BASE PIC 999.
372:                   09 HOURS PIC 999.
373:                   09 FINISHED PIC 9.
374:                07 COURSE-4.
375:                   09 COURSE-CODE PIC 999.
376:                   09 BASE PIC 999.
377:                   09 HOURS PIC 999.
378:                   09 FINISHED PIC 9.
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379:                07 COURSE-5.
380:                  09 COURSE-CODE PIC 999.
381:                  09 BASE PIC 999.
382:                  09 HOURS PIC 999.
383:                  09 FINISHED PIC 9.
384:              05 CARD-CODE PIC 9.
385:            03 CARD-3.
386:              05 SSN PIC 9(9).
387:              05 VOTECH-COURSES.
388:                07 COURSE-6.
389:                  09 COURSE-CODE PIC 999.
390:                  09 BASE  PIC 999.
391:                  09 HOURS PIC 999.
392:                  09 FINISHED PIC 9.
393:                07 COURSE-7.
394:                  09 COURSE-CODE PIC 999.
395:                  09 BASE PIC 999.
396:                  09 HOURS PIC 999.
397:                  09 FINISHED PIC 9.
398:                07 COURSE-8.
399:                  09 COURSE-CODE PIC 999.
400:                  09 BASE PIC 999.
401:                  09 HOURS PIC 999.
402:                  09 FINISHED PIC 9.
403:                07 COURSE-9.
404:                  09 COURSE-CODE PIC 999.
405:                  09 BASE PIC 999.
406:                  09 HOURS PIC 999.
407:                  09 FINISHED PIC 9.
408:                07 COURSE-10.
409:                  09 COURSE-CODE PIC 999.
410:                  09 BASE PIC 999.
411:                  09 HOURS PIC 999.
412:                  09 FINISHED PIC 9.
413:              03 CARD-4.
414:                05 SSN PIC 9(9).
415:                05 VOTECH-COURSES.
416:                  07 COURSE-11.
417:                    09 COURSE-CODE PIC 999.
418:                    09 BASE PIC 999.
419:                    09 HOURS PIC 999.
420:                    09 FINISHED PIC 9.
421:                  07 COURSE-12.
422:                    09 COURSE-CODE PIC 999.
423:                    09 BASE PIC 999.
424:                    09 HOURS PIC 999.
425:                    09 FINISHED PIC 9.
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426:                07 COURSE-13.
427:                  09 COURSE-CODE PIC 999.
428:                  09 BASE PIC 999.
429:                  09 HOURS PIC 999.
430:                  09 FINISHED PIC 9.
431:                    07 FILLER PIC X(40).
432:              05 CARD-CODE PIC 9.
433:       *
434:        01   T-RECORD.
435:             03 SSN PIC 9(9).
436:             03 RECORD-TYPE PIC X VALUE 'T'.
437:             03 CARD-1.
438:               05 GT-SCORE PIC 999.
439:               05 EDU-LEVEL PIC X.
440:               05 DOB PIC 9(6).
441:               05 RACE PIC X.
442:               05 SEX PIC X.
443:               05 GRADE PIC XX.
444:               05 APPT-DATE-E5 PIC 9(6).
445:               05 APPT-DATE-E6 PIC 9(6).
446:               05 BASIC-ENLIST-SERV-DATE PIC 9(6).
447:               05 DATE-FIRST-MOS PIC X(5).
448:               05 DUTY-MOS PIC X(5).
449:               05 PREVIOUS-ACTIVE-MILITARY-SERV PIC 9(6).
450:               05 AGREEMENT-DATE PIC 9(6).
451:               05 EER-EERWA-SCORE PIC 9(3).
452:                 05 EER-EERWA-FORM PIC 9.
453:               05 PROMOTION-POINTS PIC 9(4).
454:               05 DISCIPLINARY-ACTIONS PIC 9.
455:               05 DISCIPLINARY-ACTIONS-2627 PIC 9.
456:               05 FILLER PIC XX.
457:               05 CARDS-PER-CASE PIC 9.
458:               05 TWO-O-1-COMPLETE PIC 9.
459:               05 POST-BASE-ED-CENTER PIC X.
460:             03 CARD-2.
461:                05 ETS PIC 9(6).
462:                05 VOTECH-PARTICIP PIC 9.
463:                05 VOTECH-PARTICIPANT-TYPE.
464:                  07 AUTO    PIC 9.
465:                  07 DIESEL   PIC 9.
466:                  07 WELDING PIC 9.
467:                  07 ELECTRONICS PIC 9.
468:                 07 CONSTRUCTION PIC 9.
469:                05 OTHER-ACES-PARTICIPANT.
470:                  07 NONE PIC 9.
471:                  07 BSEP-I-II-ESL PIC  9.
472:                  07 HSCP  PIC 9.
473:                  07 SOCAD-SOC PIC 9.
474:                  07 APPRENTICISHIP PIC 9.
475:                  07 MOS-REFRESHER PIC 9.
476:                  07 HEAD-GATE-ESL PIC 9.
477:                 07 VEAP PIC 9.
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478:              05 VOTECH-COURSES.
479:                07 COURSE-1.
480:                  09 COURSE-CODE PIC 999.
481:                  09 BASE PIC 999.
482:                  09 HOURS PIC 999.
483:                  09 FINISHED PIC 9.
484:                07 COURSE-2.
485:                  09 COURSE-CODE PIC 999.
486:                  09 BASE PIC 999.
487:                  09 HOURS PIC 999.
488:                  09 FINISHED PIC 9.
489:                07 COURSE-3.
490:                  09 COURSE-CODE PIC 999.
491:                   09 BASE PIC 999.
492:                  09 HOURS PIC 999.
493:                  09 FINISHED PIC 9.
494:                07 COURSE-4.
495:                  09 COURSE-CODE PIC 999.
496:                  09 BASE PIC 999.
497:                  09 HOURS PIC 999.
498:                  09 FINISHED PIC 9.
499:                07 COURSE-5.
500:                  09 COURSE-CODE PIC 999.
501:                  09 BASE PIC 999.
502:                  09 HOURS PIC 999.
503:                  09 FINISHED PIC 9.
504:            03 CARD-3.
505:              05 VOTECH-COURSES.
506:                07 COURSE-6.
507:                  09 COURSE-CODE PIC 999.
508:                  09 BASE  PIC 999.
509:                  09 HOURS PIC 999.
510:                  09 FINISHED PIC 9.
511:                07 COURSE-7.
512:                  09 COURSE-CODE PIC 999.
513:                  09 BASE PIC 999.
514:                  09 HOURS PIC 999.
515:                  09 FINISHED PIC 9.
516:                07 COURSE-8.
517:                  09 COURSE-CODE PIC 999.
518:                  09 BASE PIC 999.
519:                  09 HOURS PIC 999.
520:                  09 FINISHED PIC 9.
521:                07 COURSE-9.
522:                  09 COURSE-CODE PIC 999.
523:                  09 BASE PIC 999.
524:                  09 HOURS PIC 999.
525:                  09 FINISHED PIC 9.
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526:                07 COURSE-10.
527:                  09 COURSE-CODE PIC 999.
528:                  09 BASE PIC 999.
529:                  09 HOURS PIC 999.
530:                  09 FINISHED PIC 9.
531:              03 CARD-4.
532:                05 VOTECH-COURSES.
533:                  07 COURSE-11.
534:                   09 COURSE-CODE PIC 999.
535:                   09 BASE PIC 999.
536:                   09 HOURS PIC 999.
537:                   09 FINISHED PIC 9.
538:                  07 COURSE-12.
539:                   09 COURSE-CODE PIC 999.
540:                   09 BASE PIC 999.
541:                   09 HOURS PIC 999.
542:                   09 FINISHED PIC 9.
543:                  07 COURSE-13.
544:                   09 COURSE-CODE PIC 999.
545:                   09 BASE PIC 999.
546:                   09 HOURS PIC 999.
547:                   09 FINISHED PIC 9.
548:       *
549:        PROCEDURE DIVISION.
550:        MAINLINE.
551:             PERFORM SET-UP-ACES-MASTER-FILE.
552:       *             PERFORM SORT-VOTECH-DATA.
553:             PERFORM  SET-UP-VOTECH-DATA-TAPE.
554:             PERFORM PROCESS-VOTECH-FILE.
555:             PERFORM SHUT-DOWN-ACES-MASTER-FILE.
556:             PERFORM SUMMARY-STATISTICS.
557:            STOP RUN.
558:       *  ************************************************
559:        SET-UP-ACES-MASTER-FILE.
560:       *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
561:       *    INVOLVING THE ACES-MASTER-FILE.
562:       *
563:            OPEN I-O        ACES-MASTER-FILE.
564:            MOVE  ZEROES  TO  SSN OF SEARCH-KEY.
565:            MOVE  'Z'  TO   RECORD-TYPE OF SEARCH-KEY.
566:            READ ACES-MASTER-FILE INTO  Z-RECORD,
567:                  INVALID KEY DISPLAY '  NO Z RECORD',  UPON PRINTER
568:                    STOP RUN.
569:             OPEN OUTPUT PRINTER1.
570:            PERFORM  PRINT-STATUS-REPORT.
571:        PRINT-STATUS-REPORT.
572:       *    MOVE  THE  DATA  OFF   Z-RECORD  TO  REPORT  PRINT  LINES
573:       *
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574:            MOVE  INTIALIZED-DATE OF Z-RECORD TO
575:                     SHOW-INTIALIZED-DATE OF STATUS-REPORT.
576:            MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
577:            MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
578:            MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
579:            MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
580:            MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
581:            MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
582:        *
583:        *   GET THE CORRECT TIME AND DATE
584:        *    PLACE  TIME, DATE  INTO  REPORT PAGE
585:            PERFORM INTIALIZE-DATE-TIME.
586:            MOVE MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT.
587:            MOVE SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
588:        *    WRITE  THE STATUS REPORT
589:        *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
590:        *                          PAGE-TOP LINES.
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590:        *                          PAGE-TOP LINES.
591:            WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
592:            WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
593:            WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
594:            WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
595:            WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
596:            WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
597:            WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
598:            WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
599:            WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
600:        *
601:         INTIALIZE-DATE-TIME.
602:        *  THIS WILL CHANGE DATE TO FORM YYMMDD
603:              ACCEPT MACHINE-DATE-TIME FROM DATE-TIME.
604:              MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
605:        *
606:        *
607:         SHUT-DOWN-ACES-MASTER-FILE.
608:        *     A STATUS REPORT WILL BE GENERATED
609:        *     A MODIFIED Z-RECORD WILL BE REWRITTEN
610:        *     ACES-MASTEFILE WILL BE CLOSED
611:        * FIRST WE UPDATE THE COUNTERS
612:               PERFORM UPDATE-COUNTERS.
613:               PERFORM PRINT-STATUS-REPORT.
614:               PERFORM WRITE-Z-RECORD.
615:            CLOSE ACES-MASTER-FILE.
616:        *
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617:       UPDATE-COUNTERS.
618:           ADD NEW-A-RECORDS-WRITTEN TO NUMBER-OF-A-RECORDS.
619:           ADD NEW-T-RECORDS-WRITTEN TO NUMBER-OF-T-RECORDS.
620:           DISPLAY '  NEW A RECORDS', NEW-A-RECORDS-WRITTEN
621:                UPON PRINTER.
622:           DISPLAY '  OLD A RECORDS', OLD-A-RECORDS-REWRITTEN
623:                UPON PRINTER.
624:           DISPLAY '  NEW T RECORDS', NEW-T-RECORDS-WRITTEN
625:                UPON PRINTER.
626:           DISPLAY '  OLD T RECORDS', OLD-T-RECORDS-REWRITTEN
627:                UPON PRINTER.
628:            MOVE O TO TOTAL-RECORDS.
629:            ADD NUMBER-OF-A-RECORDS TO TOTAL-RECORDS.
630:            ADI NUMBER-OF-B-RECORDS TO TOTAL-RECORDS.
631:            ADD NUMBER-OF-T-RECORDS TO TOTAL-RECORDS.
632:            ADD NUMBER-OF-V-RECORDS TO TOTAL-RECORDS.
633:       WRITE-Z-RECORD.
634:           MOVE  SEQUENCED-DATE TO LAST-MODIFIED-DATE OF Z-RECORD.
635:           MOVE Z-RECORD TO MASTER-RECORD.
636:           REWRITE MASTER-RECORD
637:                 INVALID KEY  DISPLAY 'Z RECORD NOT WRITTEN'
638:                UPON PRINTER.
639:      * ****************************************
640:      *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR
641:      *    FILE PROCESSING OF VOTECH DATA
642:      *SORT-VOTECH-DATA SECTION.      *
643:      *DUMMY-PARAGRAPH-NAME.
644:      *    SORT TEMP-SORT
645:      *      ON ASCENDING
646:      *        SSN OF SORT-CARD
647:      *          ASCENDING
648:      *           CARD-CODE OF SORT-CARD
649:      *        USING RAW-VOTECH-FILE
650:      *        GIVING VOTECH-FILE.
651:      *      ************************************************
652:       ANOTHER-BIG SECTION.
653:       SET-UP-VOTECH-DATA-TAPE.
654:            OPEN INPUT VOTECH-FILE.
655:           MOVE O TO VOTECH-FILE-FLAG.
656:       PROCESS-VOTECH-FILE.
657:           PERFORM INPUT-SORTED-VOTECH-CARD-IMAGE.
658:            PERFORM PROCESS-SOLDIER
659:                        UNTIL EOF-VOTECH-FILE.
660:       PROCESS-SOLDIER.
661:           MOVE SSN OF INPUT-CARD  TO OLD-SSN.
662:            MOVE O TO  CREATED-A-RECORD-FLAG,
663:                                CREATED-T-RECORD-FLAG.
664:      *
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665:      * CHECK TO SEE THAT THE SSN OF DATA IS NUMERIC
666:      * IF IT IS THEN TRY TO FIND-VERIFY THE A-RECORD
667:      *
668:           PERFORM EXAMINE-DATA.
669:      *
670:           IF NOT REJECTED-VOTECH-DATA
671:                    PERFORM FIND-CREATE-A-RECORD.
672:      *
673:           IF NOT REJECTED-VOTECH-DATA
674:               PERFORM FIND-CREATE-T-RECORD,
675:                        PERFORM EXAMINE-T-RECORD,
676:                       PERFORM WRITE-REWRITE-A-RECORD,
677:                       PERFORM WRITE-REWRITE-T-RECORD.
678:      *
679:      * IF THE DATA WAS REJECTED WE MUST PLECE A NEW CARD IN THE
680:      * THE INPUT STREAM NORMALLY THIS IS DONE IN *PROCESS-CARDS*
681:      *
682:            IF REJECTED-VOTECH-DATA
683:                      PERFORM INPUT-SORTED-VOTECH-CARD-IMAGE.
684:      *   ************************************************
685:      *
686:       EXAMINE-DATA.
687:      * HERE WE WILL CHECK ANY PRELIMINARY REQUIREMENTS TO
688:      *  WILL MOVE 2 TO CREATED-T-RECORD-FLAG
689:          IF SSN OF INPUT-CARD IS NOT NUMERIC
690:              OR CARD-CODE OF INPUT-CARD IS NOT NUMERIC
691:                        MOVE 2 TO CREATED-T-RECORD-FLAG,
692:                ADD 1 TO REJECTED-VOTECH-COUNTER,
693:              DISPLAY SSN OF INPUT-CARD, 'BAD INPUT CARD'
694:               UPON PRINTER.
695:      *
696:      *
697:       FIND-CREATE-A-RECORD.
698:           MOVE SSN OF INPUT-CARD TO SSN OF SEARCH-KEY.
699:           MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
700:           READ ACES-MASTER-FILE INTO A-RECORD,
701:               INVALID KEY PERFORM CREATE-A-RECORD.
702:           IF NOT NEW-A-RECORD PERFORM
703:                                VERIFY-A-RECORD-MATCH.
704:       CREATE-A-RECORD.
705:           MOVE 1 TO CREATED-A-RECORD-FLAG.
706:           MOVE SPACES TO A-RECORD.
707:            MOVE 'A' TO RECORD-TYPE OF A-RECORD.
708:           MOVE 0 TO MASTER-FLAGS OF A-RECORD.
709:           MOVE SEQUENCED-DATE TO CREATE-DATE OF A-RECORD.
710:           MOVE SSN OF INPUT-CARD TO SSN OF A-RECORD.
711:            MOVE DOB OF INPUT-CARD TC
712:                                    DOB OF CONTROL-INFORMATION.
713:      *
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714:        VERIFY-A-RECORD-MATCH.
715:            MOVE INPUT-CARD TO CARD-1 OF VOTECH-INPUT-DATA.
716:        *  THE PURPOSE HERE IS TO VERIFY THAT THE A-RECORD IS THE
717:        *  SAME, HOWEVER IF THE A-RECORD WAS CREATED FROM BSEP DAT
718:        *  THERE WILL BE NO DOB ONLY 999999 IN THAT PLACE
719:        *  THE IDEA HERE IS TO LET THE VERIFICATION CHECK BE
720:        *  DONE ON THE SEX COMPARISON
721:              IF DOB OF CONTROL-INFORMATION NOT EQUAL TO 999999
722:                MOVE DOB OF CONTROL-INFORMATION TO DIFFERENCE,
723:                SUBTRACT DOB OF VOTECH-INPUT-DATA FROM DIFFERENCE,
724:                  IF DIFFERENCE IS GREATER THAN  9 OR LESS THAN -9
725:                 DISPLAY 'SSN MATCH REJECT ON DOB', SSN OF INPUT-CARD,
726:                  UPON PRINTER,
727:                 ADD 1 TO IMPROPER-MATCH-DOB,
728:                  MOVE 2 TO CREATED-T-RECORD-FLAG.
729:        *
730:              IF DOB OF VOTECH-INPUT-DATA EQUAL 999999
731:                       AND SEX OF CONTROL-INFORMATION NOT EQUAL SEX
732:                                 OF VOTECH-INPUT-DATA
733:                       MOVE 2 TO CREATED-T-RECORD-FLAG,
734:                       DISPLAY 'SSN MATCH REJECT ON SEX', SSN OF INPUT-CARD,
735:                    UPON PRINTER,
736:                       ADD 1 TO IMPROPER-MATCH-SEX.
737:         FIND-CREATE-T-RECORD.
738:            MOVE 'T' TO RECORD-TYPE OF SEARCH-KEY.
739:            READ ACES-MASTER-FILE INTO T-RECORD,
740:                INVALID KEY PERFORM CREATE-T-RECORD.
741:             PERFORM INCORPORATE-DATA-CARDS.
742:         CREATE-T-RECORD.
743:            MOVE SPACES TO T-RECORD.
744:            MOVE 1 TO CREATED-T-RECORD-FLAG.
745:             PERFORM INCORPORATE-DATA-CARDS.
746:             MOVE SSN OF INPUT-CARD TO SSN OF T-RECORD.
747:             MOVE 'T' TO RECORD-TYPE OF T-RECORD.
748:        *
749:         INCORPORATE-DATA-CARDS.
750:                PERFORM PROCESS-CARDS
751:                   THROUGH INPUT-SORTED-VOTECH-CARD-IMAGE
752:                             UNTIL SSN OF INPUT-CARD NOT
753:                               EQUAL OLD-SSN
754:                            OR
755:                                  EOF-VOTECH-FILE.
756:        *
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757:        EXAMINE-T-RECORD.
758:       * HERE WE WILL SENT THE FLAGS IN THE A-RECORD DEPENDING
759:       * UPON WETHER A VOTECH PART, OR NOT IT MUST BE ONE OR OTHER
760:            MOVE SEX OF T-RECORD TO
761:               SEX OF CONTROL-INFORMATION OF A-RECORD.
762:            IF VOTECH-PARTICIP OF T-RECORD EQUAL 1
763:                  MOVE 1 TO VO-TECH-STATUS OF A-RECORD
764:                ELSE
765:                  MOVE 2 TO VO-TECH-STATUS OF A-RECORD.
766:       *
767:        WRITE-REWRITE-A-RECORD.
768:       *
769:            MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
770:            MOVE 'A' TO RECORD-TYPE OF A-RECORD.
771:             MOVE SEQUENCED-DATE TO LAST-MOD-DATE OF A-RECORD.
772:            IF NEW-A-RECORD
773:                  ADD 1 TO NEW-A-RECORDS-WRITTEN, DUMMY-COUNTER,
774:                   WRITE MASTER-RECORD FROM A-RECORD,
775:                         INVALID KEY DISPLAY 'BAD WRITE ON A RECORD',
776:                UPON PRINTER,
777:             ELSE
778:                   ADD 1 TO OLD-A-RECORDS-REWRITTEN,
779:                 DISPLAY '     ', SSN OF SEARCH-KEY, 'OLD A RECORD REWRIT',
780:                   UPON PRINTER,
781:                      REWRITE MASTER-RECORD FROM A-RECORD,
782:                            INVALID KEY DISPLAY 'BAD REWRITE ON A RECORD',
783:                   UPON PRINTER.
784:       *
785:             IF DUMMY-COUNTER EQUALS 75,
786:                         MOVE 0 TO DUMMY-COUNTER,
787:                      DISPLAY ' NEW-A-RECORDS', NEW-A-RECORDS-WRITTEN,
788:                   UPON PRINTER.
789:        WRITE-REWRITE-T-RECORD.
790:            MOVE 'T' TO RECORD-TYPE OF SEARCH-KEY.
791:            MOVE 'T' TO RECORD-TYPE OF T-RECORD.
792:            MOVE OLD-SSN TO SSN OF T-RECORD.
793:            IF NEW-T-RECORD
794:                ADD 1 TO NEW-T-RECORDS-WRITTEN,
795:                 WRITE MASTER-RECORD FROM T-RECORD.
796:                           INVALID KEY DISPLAY 'BAD WRITE ON T REC',
797:                   UPON PRINTER,
798:                 ELSE
799:                   ADD 1 TO OLD-T-RECORDS-REWRITTEN,
800:                        REWRITE MASTER-RECORD FROM T-RECORD,
801:                              INVALID KEY DISPLAY 'BAD REWRITE ON T REC',
802:                   UPON PRINTER.
803:       *   ****************************************
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804:        PROCESS-CARDS.
805:             IF FIRST-CARD PERFORM HANDLE-CARD-1,
806:              ELSE
807:            IF SECOND-CARD PERFORM HANDLE-CARD-2,
808:              ELSE
809:            IF THIRD-CARD PERFORM HANDLE-CARD-3,
810:              ELSE
811:            IF FOURTH-CARD PERFORM HANDLE-CARD-4,
812:              ELSE
813:            PERFORM BAD-CARD-NUMBER.
814:       *
815:       *
816:        INPUT-SORTED-VOTECH-CARD-IMAGE.
817:             READ VOTECH-FILE INTO INPUT-CARD AT END MOVE 1
818:                                  TO VOTECH-FILE-FLAG.
819:             ADD 1 TO CARD-IMAGES-READ.
820:       *
821:       *  ************************************************************
822:        HANDLE-CARD-1.
823:             MOVE DATA-AREA OF INPUT-CARD TO CARD-1 OF T-RECORD.
824:        HANDLE-CARD-2.
825:              MOVE DATA-AREA OF INPUT-CARD TO CARD-2 OF  T-RECORD.
826:        HANDLE-CARD-3.
827:             MOVE DATA-AREA OF INPUT-CARD TO CARD-3 OF T-RECORD.
828:        HANDLE-CARD-4.
829:             MOVE DATA-AREA OF INPUT-CARD TO CARD-4 OF T-RECORD.
830:         BAD-CARD-NUMBER.
831:             DISPLAY ' BAD CARD NUMBER', INPUT-CARD UPON PRINTER.
832:         SUMMARY-STATISTICS.
833:              DISPLAY  'CARDS IMAGES READ'  CARD-IMAGES-READ
834:                 UPON PRINTER.
835:             DISPLAY 'NEW A RECORDS' NEW-A-RECORDS-WRITTEN
836:                 UPON PRINTER.
837:             DISPLAY 'NEW T RECORDS' NEW-T-RECORDS-WRITTEN
838:                 UPON PRINTER.
839:             DISPLAY 'OLD A RECORDS' OLD-A-RECORDS-REWRITTEN
840:                 UPON PRINTER.
841:             DISPLAY 'OLD T RECORDS' OLD-T-RECORDS-REWRITTEN
842:                 UPON PRINTER.
EOF:842 SCAN:252
0:>
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```
IDENTIFICATION DIVISION.
PROGRAM-ID. MILPERCEN.
AUTHOR. JOHN HAMILL.
INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
DATE-WRITTEN. MAY 1980.
DATE-COMPILED.
SECURITY. NO SECURITY CLEARANCE.
REMARKS.   THE PURPOSE OF THIS PROGRAM IS
      INCORPORATE MILPERCEN DATA ON TO A-RECORDS.
ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SOURCE-COMPUTER. UNIVAC-1108.
OBJECT-COMPUTER. UNIVAC-1108.
INPUT-OUTPUT SECTION.
FILE-CONTROL.
    SELECT  ACES-MASTER-FILE ASSIGN TO MASS-STORAGE MASTER
                ORGANIZATION IS INDEXED,
            ACCESS MODE IS SEQUENTIAL
            PROCESSING MODE IS SEQUENTIAL,
            FILE-LIMIT IS 20000
            ACTUAL KEY IS  SEARCH-KEY.
    SELECT PRINTER1 ASSIGN TO PRINTER.
    SELECT MILPERCEN ASSIGN TO CARD-READER EMFDATA.
DATA DIVISION.
FILE SECTION.
*
FD  ACES-MASTER-FILE
    LABEL RECORDS ARE STANDARD,
    RECORD CONTAINS 300 CHARACTERS,
    BLOCK CONTAINS 30 RECORDS.
*
01  MASTER-RECORD.
    03  SEARCH-KEY.
     05   SSN   PIC  9(9).
     05   RECORD-TYPE PIC X.
    03  DATA-AREA PIC  X(290).
FD   MILPERCEN
    LABEL RECORDS ARE STANDARD,
     RECORD CONTAINS 90 CHARACTERS.
01  MILPERCEN-RECORD.
    02 MILPERCEN-RECORD-DUMMY.
     05 SSN PIC 9(9).
     05 MILPERCEN-DATA.
      07 SEX PIC X.
      07 RACE PIC X.
      07 MARST PIC X.
      07 DOB PIC X(6).
      07 TERMS PIC X.
      07 ETSDT PIC X(6).
      07 EGPCD PIC  X.
      07 BPEDT PIC XXXX.
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```
           07 PAYGR PIC X.
           07 LOR PIC X(6).
           07 AFQSC PIC XX.
           07 CIVED PIC X.
           07 PMOS PIC X(5).
      *
      *   THE SMOS FIELD WAS SENT ON THE REQUEST TAPE
      *   HOWEVER IT WAS NOT ON THE ORIGINAL TAPE OF
      *   ALL SOLDIERS
      *
               07  SMOS    PIC X(5).
      *
            07 DMOS PIC X(5).
             07 TYPLA PIC XX.
             07 DATLA PIC X(6).
             07 PSVCI PIC X.
             07 EERWA PIC XXX.
             07 CMF PIC XX.
             07 AITDT PIC XXX.
             07 GTSCR PIC XXX.
             07 PQDES PIC X(4).
             07 PSQDT PIC X(4).
             07 PQSCR PIC XXX.
             07 PQPER PIC XX.
             07 FILLER   PIC XX.
       FD  PRINTER1
           LABEL RECORDS ARE OMITTED
                  DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE.
           03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
           03 PRINT-DATA  PIC  X(121).
       WORKING-STORAGE SECTION.
       77  DUMMY-COUNTER   PIC 9(6) VALUE 0.
      *
       77  NO-MIL-DATA-COUNTER PIC 9(11) VALUE 0.
       77  SEQ-CHECK      PIC 9(9) VALUE 0.
      *
      *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
      *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
      *
       01  MACHINE-DATE-TIME.
           03 MACHINE-DATE.
             05 MM-DATE  PIC  99.
             05 DD-DATE  PIC  99.
             05 YY-DATE  PIC  99.
           03 MACHINE-TIME.
             05 HOUR-DATE PIC 99.
             05 MIN-DATE  PIC 99.
             05 SEC-DATE  PIC 99.
      *
```

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102:      *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
103:      *  FOR SORTING ON THE 6 FIELD CODE
104:      *
105:       01  SEQUENCED-DATE.
106:           03  YY-DATE   PIC  99.
107:           03  MM-DATE   PIC  99.
108:           03  DD-DATE   PIC  99.
109:      *
110:      *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
111:      *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
112:      *  AND SOME RECORD TYPE (A,B,T, OR V)
113:      *
114:      *
115:      *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
116:      *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
117:      *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
118:      *  NUMERIC VALUE
119:      *
120:       01  A-RECORD.
121:           02 A-RECORD-DUMMY.
122:           03  SSN-TYPE .
123:             05  SSN PIC   9(9).
124:             05  RFCORD-TYPE  PIC  X VALUE 'A'.
125:           03  MASTER-FLAGS.
126:             05  BSEP-LIT-STATUS PIC  9.
127:                  88  NO-B-RECORD VALUE 0.
128:                  88  BSEP-LIT-PARTIC       VALUE  1.
129:                  88  BSEP-LIT-NON-PARTIC       VALUE 2.
130:             05  BSEP-ESL-STATUS PIC  9.
131:                  88  NO-B-RECORD         VALUE 0.
132:                  88  BSEP-ESL-PARTIC     VALUE 1.
133:                  88  BSEP-ESL-NON-PARTIC VALUE 2.
134:             05  VO-TECH-STATUS PIC  9.
135:                  88  NO-T-RECORD         VALUE 0.
136:                  88  VO-TECH-PARTIC      VALUE 1.
137:                  88  VO-TECH-NON-PARTIC  VALUE 2.
138:             05  VEAP-STATUS PIC 9.
139:                  88  NO-V-RECORD              VALUE 0.
140:                  88  VEAP-PARTIC              VALUE 1.
141:                  88  VEAP-WITHDRAW-RETURN     VALUE 2.
142:                  88  VEAP-WITHDRAW-NO-RETURN VALUE 3.
143:                  88  VEAP-NON-PARTIC          VALUE 4.
144:           03  A-RECORD-STATUS.
145:             05  MILPERCEN-FLAG PIC 9.
146:                  88  MILPERCEN-PRESENT       VALUE 1.
147:             05  DMDC-FLAG PIC  9.
148:                  88  DMDC-PRESENT            VALUE 1.
149:             05  TSC-FLAG  PIC  9.
150:                  88  TSC-PRESENT             VALUE 1.
151:             05  EREC-FLAG PIC  9.
152:                  88  EREC-PRESENT            VALUE 1.
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153:              05  CREATE-DATE.
154:                   07 CREATE-YY  PIC 99.
155:                   07 CREATE-MM  PIC 99.
156:                   07 CREATE-DD  PIC 99.
157:              05  LAST-MOD-DATE.
158:                   07 LAST-MOD-YY PIC 99.
159:                   07 LAST-MOD-MM PIC 99.
160:                   07 LAST-MOD-DD PIC 99.
161:            03  CONTROL-INFORMATION.
162:              05  DOB.
163:                   07 DOB-YY  PIC  99.
164:                   07 DOB-MM  PIC  99.
165:                   07 DOB-DD  PIC  99.
166:              05  SEX  PIC  X.
167:                   88 MALE    VALUE 'M'.
168:                   88 FEMALE  VALUE 'F'.
169:            03  MILPERCEN-DATA.
170:              07 SEX PIC X.
171:              07 RACE PIC X.
172:              07 MARST PIC X.
173:              07 DOB PIC X(6).
174:              07 TERMS PIC X.
175:              07 ETSDT PIC X(6).
176:              07 EGPCD PIC  X.
177:              07 BPEDT PIC XXXX.
178:              07 PAYGR PIC X.
179:              07 DOR PIC X(6).
180:              07 AFQSC PIC XX.
181:              07 CIVED PIC X.
182:              07 PMOS PIC X(5).
183:              07 DMOS PIC X(5).
184:              07 TYPLA PIC XX.
185:              07 DATLA PIC X(6).
186:              07 PSVCI PIC X.
187:              07 EERWA PIC XXX.
188:              07 CMF PIC XX.
189:              07 AITDT PIC XXX.
190:              07 GTSCR PIC XXX.
191:              07 PQDES PIC X(4).
192:              07 PSQDT PIC X(4).
193:              07 PQSCR PIC XXX.
194:              07 PQPER PIC XX.
195:                 07  SMOS   PIC X(5).
196:                 07  FILLER  PIC X(4).
197:               03   DMDC-DATA        PIC X(124).
198:               03   TSC-DATA         PIC X(56).
199:          *
200:          *
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201:      *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
202:      *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
203:      *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
204:      *  INDEX FOR Z RECORD IS  000000000Z
205:      *
206:       01  Z-RECORD.
207:           03 SSN-TYPE.
208:             05  SSN  PIC 9(9).
209:             05  RECORD-TYPE PIC  X  VALUE 'Z'.
210:           03 INTIALIZED-DATE.
211:             05   INTIALIZED-YY  PIC  99.
212:             05   INTIALIZED-MM  PIC  99.
213:             05   INTIALIZED-DD  PIC  99.
214:           03 LAST-MODIFIED-DATE.
215:             05  LAST-MODIFIED-YY  PIC  99.
216:             05  LAST-MODIFIED-MM  PIC  99.
217:             05  LAST-MODIFIED-DD  PIC  99.
218:           03 RECORD-COUNTS.
219:             05   NUMBER-OF-A-RECORDS PIC  9(7).
220:             05   NUMBER-OF-B-RECORDS PIC  9(7).
221:             05   NUMBER-OF-T-RECORDS PIC  9(7).
222:             05   NUMBER-OF-V-RECORDS PIC  9(7).
223:             05   TOTAL-RECORDS       PIC  9(11).
224:      *
225:      *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
226:      *
227:       01  STATUS-REPORT.
228:           03 LINE-1.
229:             05  FILLER PIC X(20) VALUE SPACES.
230:             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
231:      -    ' FILE'.
232:           03 LINE-2.
233:             05  FILLER  PIC X(30) VALUE SPACES.
234:             05  FILLER  PIC X(8)  VALUE 'TIME   '.
235:             05  SHOW-TIME   PIC   X(6).
236:           03 LINE-3.
237:             05  FILLER  PIC X(30) VALUE SPACES.
238:             05  FILLER  PIC X(8)  VALUE  'DATE    '.
239:             05  SHOW-DATE   PIC  99/99/99.
240:           03 LINE-4.
241:             05  FILLER  PIC  X(3) VALUE SPACES.
242:             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
243:             05  FILLER  PIC  X(9) VALUE SPACES.
244:             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
245:             05  FILLER  PIC  X(23) VALUE   SPACES.
246:             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
247:             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
248:           03 LINE-5.
249:             05  FILLER  PIC  X(12) VALUE SPACES.
250:             05  FILLER  PIC  X(15) VALUE  'A'.
251:             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
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252:           03 LINE-6.
253:             05  FILLER  PIC  X(12)  VALUE SPACES.
254:             05  FILLER  PIC  X(15)  VALUE 'B'.
255:             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
256:           03 LINE-7.
257:             05  FILLER   PIC  X(12) VALUE SPACES.
258:             05  FILLER   PIC  X(15) VALUE   'T'.
259:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
260:             05  FILLER   PIC  X(25) VALUE SPACES.
261:             05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
262:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
263:           03 LINE-8.
264:             05  FILLER  PIC  X(12) VALUE SPACES.
265:             05  FILLER  PIC  X(15) VALUE 'V'.
266:             05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
267:           03  LINE-9.
268:             05 FILLER PIC  X(28) VALUE SPACES.
269:             05 FILLER PIC  X(6)  VALUE '------'.
270:           03  LINE-10.
271:             05 FILLER  PIC  X(9) VALUE SPACES.
272:             05 FILLER  PIC  X(15) VALUE 'TOTAL'.
273:             05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
274:       01  RECORD-COUNTERS.
275:          03 MILPERCEN-RECORDS-READ PIC 9(9) VALUE 0.
276:          03 UPDATED-A-RECORDS PIC 9(9) VALUE 0.
277:       01  MILPERCEN-RECORD-FLAG PIC 9.
278:               88 MILPERCEN-RECORD-MATCHES VALUE 0.
279:                 88 RECORD-REJECTED VALUE 1.
280:       01   ACES-FILE-FLAG PIC 9 VALUE 0.
281:              88 EOF-ACES-MASTER-FILE VALUE 1.
282:        01 MILPERCEN-FILE-FLAG PIC 9 VALUE 0.
283:              88  EOF-MILPERCEN-FILE VALUE 1.
284:       PROCEDURE DIVISION.
285:       MAIN-LINE.
286:           OPEN OUTPUT PRINTER1.
287:           PERFORM SET-UP-ACES-MASTER-FILE.
288:           PERFORM  SET-UP-MILPERCEN-DATA-TAPE.
289:            PERFORM INPUT-NEXT-A-RECORD.
290:           DISPLAY ' BEGIN MILPERCEN UPDATE, PRIMING RECORDS ARE '
291:                    UPON PRINTER.
292:           DISPLAY '    MASTER-RECORD - ' MASTER-RECORD.
293:           DISPLAY '    MILPERCEN-DATA - ' MILPERCEN-RECORD.
294:           PERFORM  PROCESS-SOLDIER  THROUGH INPUT-NEXT-A-RECORD
295:                  UNTIL EOF-ACES-MASTER-FILE OR EOF-MILPERCEN-FILE.
296:      * CHANGE THE 10 TIMES TO EOF-ACES-MASTER-FILE MARKER AFTER TESTING JNH
297:      *  AND EOF-MILPERCEN-FILE NOTE THAT BOTH WILL SHUT OFF PROCESS
298:           PERFORM SHUT-DOWN-ACES-MASTER-FILE.
299:            PERFORM SUMMARY-STATS.
300:           STOP RUN.
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301:        SET-UP-MILPERCEN-DATA-TAPE.
302:            OPEN INPUT MILPERCEN.
303:            CLOSE MILPERCEN.
304:            OPEN INPUT MILPERCEN.
305:            MOVE 0 TO MILPERCEN-FILE-FLAG.
306:            PERFORM INPUT-MILPERCEN-RECORD.
307:       *  **************************************************
308:        SET-UP-ACES-MASTER-FILE.
309:       *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
310:       *    INVOLVING THE ACES-MASTER-FILE.
311:       *
312:            OPEN I-O        ACES-MASTER-FILE.
313:            MOVE  ZEROES  TO  SSN OF SEARCH-KEY.
314:            MOVE  'Z'  TO   RECORD-TYPE OF SEARCH-KEY.
315:            READ ACES-MASTER-FILE INTO  Z-RECORD,
316:                            AT END MOVE 1 TO ACES-FILE-FLAG.
317:            PERFORM  PRINT-STATUS-REPORT.
318:        PRINT-STATUS-REPORT.
319:       *    MOVE  THE  DATA  OFF   Z-RECORD  TO  REPORT  PRINT  LINES
320:       *
321:            MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
322:                                  OF  STATUS-REPORT.
323:            MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
324:            MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
325:            MOVE  NUMBER-OF-B-RECORDS TO SH
320:       *
321:            MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
322:                                  OF  STATUS-REPORT.
323:            MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
324:            MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
325:            MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
326:            MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
327:            MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
328:            MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
329:       *
330:       *   GET THE CORRECT TIME AND DATE
331:       *    PLACE  TIME, DATE  INTO  REPORT PAGE
332:            PERFORM INTIALIZE-DATE-TIME.
333:            MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
334:            MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
335:       *    WRITE  THE STATUS REPORT
336:       *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
337:       *                          PAGE-TOP LINES.
338:            WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
339:            WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
340:            WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
341:            WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
342:            WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
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343:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
344:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
345:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
346:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
347:       *
348:        INTIALIZE-DATE-TIME.
349:       *
350:           ACCEPT MACHINE-DATE-TIME FROM DATE-TIME.
351:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
352:       *
353:       *
354:        SHUT-DOWN-ACES-MASTER-FILE.
355:       *     A STATUS REPORT WILL BE GENERATED
356:       *  ALL COUNTERS WILL BE UPDATED
357:       *     A MODIFIED Z-RECORD WILL BE REWRITTEN
358:       *     ACES-MASTEFILE WILL BE CLOSED
359:           PERFORM PRINT-STATUS-REPORT.
360:           PERFORM WRITE-Z-RECORD.
361:           CLOSE ACES-MASTER-FILE, MILPERCEN.
362:       *
363:        WRITE-Z-RECORD.
364:           MOVE  SEQUENCED-DATE TO LAST-MODIFIED-DATE OF Z-RECORD.
365:           MOVE Z-RECORD TO MASTER-RECORD.
366:           REWRITE MASTER-RECORD
367:                 INVALID KEY  DISPLAY 'Z RECORD NOT WRITTEN'
368:                    UPON PRINTER.
369:       * ***************************************************************
370:       *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR MILPERCEN
371:       *    FILE PROCESSING
372:       *   ***************************************************************
373:       * THIS IS THE TOP OF THE MILPERCEN PROCESSING LOOP
374:       *  IT WILL BE REPEATED A NUMER OF TIMES EQUAL TO THE
375:       *  NUMBER OF MILPERCEN DATA RECORDS
376:       *  ***********************************************************
377:        PROCESS-SOLDIER.
378:       *
379:            ADD 1 TO DUMMY-COUNTER.
380:            IF DUMMY-COUNTER EQUALS 200
381:                 MOVE ZEROS TO DUMMY-COUNTER
382:                DISPLAY ' ', SSN OF MASTER-RECORD, ' AT MIL - ',
383:                    MILPERCEN-RECORDS-READ UPON PRINTER.
384:       * NEXT WE WILL SEE IF THERE IS MILPERCENN A-RECORD ON THIS SOLDIER AND
385:       * DETERMINE BY MEANS OF A SEX COMPARISON IF THE TWO ARE THE
386:       * SAME IE MILPERCEN INPUT AND THE A-RECORD
387:            PERFORM INPUT-MILPERCEN-RECORD UNTIL
388:                    SSN OF MILPERCEN-RECORD IS NOT LESS THAN
389:                         SSN OF MASTER-RECORD.
390:       *
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391:      * IF THERE IS A MILPERCEN RECORD IT WILL NOW BE IN
392:      * CORE  NEXT WE CHECK TO SEE IF THEY MATCH
393:           PERFORM VERIFY-MILPERCEN-MATCH.
394:      *
395:      *    NOW IF THE A-RECORD WAS MATCHED WITH MILPERCEN
396:      *    THE A-RECORD CAN BE UPDATED AND REWRITTEN
397:      *    OTHERWISE WE WILL PRINT THE A-RECORD FOR NOT
398:      *    NOT HAVING A MILPERCEN RECORD
399:           IF MILPERCEN-RECORD-MATCHES
400:                      PERFORM UPDATE-A-RECORD,
401:                       PERFORM REWRITE-A-RECORD,
402:           ELSE
403:               ADD 1 TO NO-MIL-DATA-COUNTER.
404:       INPUT-NEXT-A-RECORD.
405:      * SINCE THERE IS MORE THAN ONE TYPE OF RECORD WE SELECT ONLY
406:      * THE MASTER RECORD FOR EACH SOLDIER
407:          PERFORM INPUT-NEXT-LOGICAL-RECORD.
408:           PERFORM INPUT-NEXT-LOGICAL-RECORD UNTIL
409:                    EOF-ACES-MASTER-FILE
410:                  OR
411:                    RECORD-TYPE OF MASTER-RECORD EQUALS 'A'.
412:       INPUT-NEXT-LOGICAL-RECORD.
413:          READ ACES-MASTER-FILE INTO A-RECORD
414:               AT END MOVE 1 TO ACES-FILE-FLAG.
415:           IF SSN OF A-RECORD EQUALS 999999999
416:                          MOVE 1 TO ACES-FILE-FLAG.
417:       VERIFY-MILPERCEN-MATCH.
418:      * NOTE THAT ANY VALIDATION OF THE RECORDS SHOULD BE DONE HERE
419:          MOVE 0 TO MILPERCEN-RECORD-FLAG.
420:           IF SSN OF MILPERCEN-RECORD NOT EQUAL
421:                 SSN OF MASTER-RECORD MOVE 1 TO MILPERCEN-RECORD-FLAG,
422:      *          DISPLAY ' NO DATA - ', SSN OF MASTER-RECORD,
423:      *                ' - NEXT MIL - ', SSN OF MILPERCEN-RECORD
424:      *            UPON PRINTER.
425:          IF MILPERCEN-RECORD-MATCHES
426:               AND SEX OF MILPERCEN-RECORD
427:                     NOT EQUAL SEX OF CONTROL-INFORMATION  OF A-RECORD
428:                        DISPLAY '      BAD MATCH ON SEX',
429:                       SEX OF MILPERCEN-RECORD, 'MIL',
430:                        SEX OF CONTROL-INFORMATION OF A-RECORD,
431:                                        'A' UPON PRINTER.
432:      *                  MOVE 1 TO MILPERCEN-RECORD-FLAG.
433:      *
434:       UPDATE-A-RECORD.
435:      * HERE WE WILL MOVE ALL THE DATA WE WISH OFF THE MIL RECORD
436:      * AND INTO THE A-RECORD
437:           MOVE CORRESPONDING MILPERCEN-DATA OF MILPERCEN-RECORD
438:                           TO MILPERCEN-DATA OF A-RECORD.
439:      *
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      * PLACE BIRTH DATE AND SEX IN CONTROL IF NOT THERE ALREADY
      *
           IF DOB-YY OF CONTROL-INFORMATION LESS THAN 20
               OR GREATER 70
               MOVE DOB OF MILPERCEN-RECORD TO DOB OF
                   CONTROL-INFORMATION.
           IF SEX OF CONTROL-INFORMATION EQUAL SPACES
               MOVE SEX OF MILPERCEN-RECORD TO
                   SEX OF CONTROL-INFORMATION.
             ADD 1 TO UPDATED-A-RECORDS.
            MOVE 1 TO MILPERCEN-FLAG.
       REWRITE-A-RECORD.
           MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
           MOVE SEQUENCED-DATE TO LAST-MOD-DATE OF A-RECORD.
           MOVE A-RECORD TO MASTER-RECORD.
           REWRITE MASTER-RECORD
                       INVALID KEY DISPLAY
                          ' INVALID ATTEMPT REWRI *A* REC'
                    UPON PRINTER.
       INPUT-MILPERCEN-RECORD.
            READ MILPERCEN  AT END MOVE 1 TO MILPERCEN-FILE-FLAG.
            ADD 1 TO MILPERCEN-RECORDS-READ.
      *
      * WANT TO DO A SEQUENCE CHECK ON THESE RECORDS
      *
           IF SSN OF MILPERCEN-RECORD NOT GREATER THAN SEQ-CHECK
               DISPLAY 'SEQUENCE PROBLEM -  NEW REC ' SSN OF
                   MILPERCEN-RECORD
               DISPLAY '                        OLD REC ' SEQ-CHECK.
           MOVE SSN OF MILPERCEN-RECORD TO SEQ-CHECK.
      *    IF MILPERCEN-RECORDS-READ GREATER THAN 119200
      *          MOVE 1 TO MILPERCEN-FILE-FLAG.
         SUMMARY-STATS.
            DISPLAY MILPERCEN-RECORDS-READ, 'MIL RECS READ'
                    UPON PRINTER.
            DISPLAY NO-MIL-DATA-COUNTER, 'NO MIL DATA'
                    UPON PRINTER.
            DISPLAY UPDATED-A-RECORDS, 'UPDATED A RECS'
                    UPON PRINTER.
EOF:478 SCAN:135
0:>
```

```
1:        IDENTIFICATION DIVISION.
2:        PROGRAM-ID. SSN.
3:        AUTHOR. JOHN HAMILL.
4:        INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
5:        DATE-WRITTEN. MAY 1980.
6:        DATE-COMPILED.
7:        SECURITY. NO SECURITY CLEARANCE.
8:        REMARKS.   THE PURPOSE OF THIS PROGRAM IS
9:            PRODUCE TWO TYPES OF OUTPUT
10:                    I) THOSE SOLDIERS WHO HAVE BEEN ACCEPTED INTO
11:                       THE PROGRAM IE SELECTABLE-ABLE-TEST-SCORE
12:                       OF LESS THAN 50 OR ECL-PRETEST
13:                       OF LESS THAN 70
14:                   II) THOSE SOLDIERS WHO HAVE NOT BEEN ACCEPTED
15:                          INTO THE PROGRAM (WHICH SHOULD BE FEW)
16:                          AND HAVE HIGHER ECL PRE TEST SCORES
17:                          AND SELECT-ABLE-TEST-SCORES
18:       ENVIRONMENT DIVISION.
19:       CONFIGURATION SECTION.
20:       SOURCE-COMPUTER. UNIVAC-1108.
21:       OBJECT-COMPUTER. UNIVAC-1108.
22:       INPUT-OUTPUT SECTION.
23:       FILE-CONTROL.
24:           SELECT ACES-MASTER-FILE
25:             ASSIGN TO MASS-STORAGE MASTER
26:               ORGANIZATION IS INDEXED,
27:                   ACCESS MODE IS SEQUENTIAL,
28:                FILE-LIMIT IS 2300
29:                  ACTUAL KEY IS DUM-SEARCH-KEY.
30:           SELECT PRINTER1 ASSIGN TO PRINTER.
31:           SELECT SSN-LIST ASSIGN TO PRINTER SSNLIST.
32:       *
33:        DATA DIVISION.
34:        FILE SECTION.
35:       *
36:        FD  ACES-MASTER-FILE
37:            LABEL RECORDS ARE STANDARD,
38:             RECORD CONTAINS 300 CHARACTERS,
39:             BLOCK CONTAINS 30 RECORDS.
40:       *
41:        01  MASTER-RECORD.
42:            03  SEARCH-KEY.
43:             05   SSN   PIC  9(9).
44:             05   RECORD-TYPE PIC X.
45:            03  DATA-AREA PIC  X(290).
46:        FD  PRINTER1
47:            LABEL RECORDS ARE OMITTED
48:                    DATA RECORD IS PRINT-LINE.
49:        01  PRINT-LINE.
50:            03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
51:            03 PRINT-DATA  PIC  X(121).
```

```
52:       FD  SSN-LIST
53:           LABEL RECORDS ARE OMITTED
54:                  DATA RECORD IS SSN-DATA.
55:       01  SSN-DATA.
56:           03 SSN-CODE    PIC  9(9).
57:           03 REST        PIC  X(71).
58:       WORKING-STORAGE SECTION.
59:       77  DUM-SEARCH-KEY    PIC X(10).
60:       77  DUMMY-COUNTER    PIC 9(6) VALUE 0.
61:       01  SOLDIER-PRINT-AREA.
62:            03  PRINT-AREA-1.
63:               05 SSN PIC 9(9).
64:               05 FILLER PIC X(10) VALUE 'DOB'.
65:                05 FILLER PIC X(3) VALUE SPACES.
66:                  05 DOB PIC XX/XX/XX .
67:       *
68:       *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
69:       *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
70:       *
71:       01  MACHINE-DATE-TIME.
72:           03 MACHINE-DATE.
73:             05 MM-DATE  PIC  99.
74:             05 DD-DATE  PIC  99.
75:             05 YY-DATE  PIC  99.
76:           03 MACHINE-TIME.
77:             05 HOUR-DATE PIC 99.
78:             05 MIN-DATE  PIC 99.
79:             05 SEC-DATE  PIC 99.
80:       *
81:       *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
82:       *  FOR SORTING ON THE 6 FIELD CODE
83:       *
84:       01  SEQUENCED-DATE.
85:           03  YY-DATE   PIC  99.
86:           03  MM-DATE   PIC  99.
87:           03  DD-DATE   PIC  99.
88:       *
89:       *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
90:       *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
91:       *  AND SOME RECORD TYPE (A,B,T, OR V)
92:       *
93:       *
94:       *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
95:       *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
96:       *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
97:       *  NUMERIC VALUE
98:       *
```

```
01  A-RECORD.
    02 A-RECORD-DUMMY.
    03  SSN-TYPE .
      05  SSN PIC   9(9).
      05  RECORD-TYPE  PIC  X VALUE 'A'.
    03  MASTER-FLAGS.
      05  BSEP-LIT-STATUS PIC  9.
           88  NO-B-RECORD VALUE 0.
           88  BSEP-LIT-PARTIC       VALUE  1.
           88  BSEP-LIT-NON-PARTIC       VALUE 2.
      05  BSEP-ESL-STATUS PIC  9.
           88  NO-B-RECORD          VALUE 0.
           88  BSEP-ESL-PARTIC      VALUE 1.
           88  BSEP-ESL-NON-PARTIC VALUE 2.
      05  VO-TECH-STATUS PIC  9.
           88  NO-T-RECORD          VALUE 0.
           88  VO-TECH-PARTIC       VALUE 1.
           88  VO-TECH-NON-PARTIC   VALUE 2.
      05  VEAP-STATUS PIC 9.
           88  NO-V-RECORD               VALUE 0.
           88  VEAP-PARTIC               VALUE 1.
           88  VEAP-WITHDRAW-RETURN      VALUE 2.
           88  VEAP-WITHDRAW-NO-RETURN VALUE 3.
           88  VEAP-NON-PARTIC           VALUE 4.
    03  A-RECORD-STATUS.
      05  MILPERCEN-FLAG PIC 9.
           88  MILPERCEN-PRESENT         VALUE 1.
      05  DMDC-FLAG PIC  9.
           88  DMDC-PRESENT              VALUE 1.
      05  TSC-FLAG  PIC  9.
           88  TSC-PRESENT               VALUE 1.
      05  EREC-FLAG PIC  9.
           88  EREC-PRESENT              VALUE 1.
      05  CREATE-DATE.
           07 CREATE-YY  PIC 99.
           07 CREATE-MM  PIC 99.
           07 CREATE-DD  PIC 99.
      05  LAST-MOD-DATE.
           07 LAST-MOD-YY PIC 99.
           07 LAST-MOD-MM PIC 99.
           07 LAST-MOD-DD PIC 99.
    03  CONTROL-INFORMATION.
      05  DOB.
           07 DOB-YY  PIC  99.
           07 DOB-MM  PIC  99.
           07 DOB-DD  PIC  99.
      05  SEX  PIC  X.
           88 MALE    VALUE 'M'.
           88 FEMALE  VALUE 'F'.
```

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148:           03  MILPERCEN-DATA.
149:             07 SEX PIC X.
150:             07 RACE PIC X.
151:             07 MARST PIC X.
152:             07 DOB PIC X(6).
153:             07 TERMS PIC X.
154:             07 ETSDT PIC X(6).
155:             07 EGPCD PIC  X.
156:             07 BPELT PIC XXXX.
157:             07 PAYGR PIC X.
158:             07 DOR PIC X(6).
159:             07 AFQSC PIC XX.
160:             07 CIVED PIC X.
161:             07 PMOS PIC X(5).
162:             07 DMOS PIC X(5).
163:             07 TYPLA PIC XX.
164:             07 DATLA PIC X(6).
165:             07 PSVCI PIC X.
166:             07 EERWA PIC XXX.
167:             07 CMF PIC XX.
168:             07 AITDT PIC XXX.
169:             07 GTSCR PIC XXX.
170:             07 PQDES PIC X(4).
171:             07 PSQDT PIC X(4).
172:             07 PQSCR PIC XXX.
173:             07 PQPER PIC XX.
174:               07  SMOS   PIC X(5).
175:               07  FILLER  PIC X(4).
176:           03   DMDC-DATA          PIC X(124).
177:           03   TSC-DATA           PIC X(56).
178:       *
179:       *
180:       *
181:       *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
182:       *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
183:       *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
184:       *  INDEX FOR Z RECORD IS  0000000002
185:       *
186:        01  Z-RECORD.
187:            03 SSN-TYPE.
188:              05  SSN  PIC 9(9).
189:              05  RECORD-TYPE PIC  X  VALUE 'Z'.
190:            03 INTIALIZED-DATE.
191:              05   INTIALIZED-YY  PIC  99.
192:              05   INTIALIZED-MM  PIC  99.
193:              05   INTIALIZED-DD  PIC  99.
194:            03 LAST-MODIFIED-DATE.
195:              05  LAST-MODIFIED-YY  PIC  99.
196:              05  LAST-MODIFIED-MM  PIC  99.
197:              05  LAST-MODIFIED-DD  PIC  99.
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198:           03 RECORD-COUNTS.
199:             05   NUMBER-OF-A-RECORDS PIC  9(7).
200:             05   NUMBER-OF-B-RECORDS PIC  9(7).
201:             05   NUMBER-OF-T-RECORDS PIC  9(7).
202:             05   NUMBER-OF-V-RECORDS PIC  9(7).
203:             05   TOTAL-RECORDS       PIC  9(11).
204:       *
205:         01 SOLDIER-LINE.
206:             03 FILLER PIC X  VALUE SPACES.
207:             03 SSN PIC 9(9).
208:             03 FILLER PIC X(5) VALUE SPACES.
209:             03 DOB PIC 9(6).
210:       *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
211:       *
212:          01  STATUS-REPORT.
213:           03 LINE-1.
214:             05  FILLER PIC X(20) VALUE SPACES.
215:             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
216:       -     ' FILE'.
217:           03 LINE-2.
218:             05  FILLER  PIC X(30) VALUE SPACES.
219:             05  FILLER  PIC X(8)  VALUE 'TIME   '.
220:             05  SHOW-TIME   PIC   X(6).
221:           03 LINE-3.
222:             05  FILLER  PIC X(30) VALUE SPACES.
223:             05  FILLER  PIC X(8)  VALUE  'DATE    '.
224:             05  SHOW-DATE   PIC  99/99/99.
225:           03 LINE-4.
226:             05  FILLER  PIC  X(3) VALUE SPACES.
227:             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
228:             05  FILLER  PIC  X(9) VALUE SPACES.
229:             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
230:             05  FILLER  PIC  X(23) VALUE   SPACES.
231:             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
232:             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
233:           03 LINE-5.
234:             05  FILLER  PIC  X(12) VALUE SPACES.
235:             05  FILLER  PIC  X(15) VALUE  'A'.
236:             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
237:           03 LINE-6.
238:             05  FILLER  PIC  X(12)  VALUE SPACES.
239:             05  FILLER  PIC  X(15)  VALUE 'B'.
240:             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
241:           03 LINE-7.
242:             05  FILLER   PIC  X(12) VALUE SPACES.
243:             05  FILLER   PIC  X(15) VALUE   'T'.
244:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
245:             05  FILLER   PIC  X(25) VALUE SPACES.
246:             05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
247:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
```

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248:           03 LINE-8.
249:             05  FILLER  PIC  X(12) VALUE SPACES.
250:             05  FILLER  PIC  X(15) VALUE 'V'.
251:             05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
252:           03  LINE-9.
253:             05 FILLER PIC  X(28) VALUE SPACES.
254:             05 FILLER PIC  X(6)  VALUE '------'.
255:           03  LINE-10.
256:             05 FILLER  PIC  X(9) VALUE SPACES.
257:             05 FILLER  PIC  X(15) VALUE 'TOTAL'.
258:             05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
259:       01  CREATED-A-RECORD-FLAG PIC  9.
260:           88 OLD-A-RECORD VALUE 0.
261:           88 NEW-A-RECORD VALUE 1.
262:       01  CREATED-B-RECORD-FLAG PIC 9.
263:           88 OLD-B-RECORD VALUE 0.
264:           88 NEW-B-RECORD VALUE 1.
265:       01  TRADOC-FILE-FLAG PIC 9.
266:              88 EOF-TRADOC-DATA-TAPE VALUE 1.
267:       01  RECORD-COUNTERS.
268:           03 NUMBER-RECORDS-READ PIC 9(9) .
269:         03 NUMBER-RECORDS-PRINTED PIC 9(9).
270:       01  ACES-FILE-FLAG PIC 9 VALUE 0.
271:           88 EOF-ACES-FILE VALUE 1.
272:       PROCEDURE DIVISION.
273:       MAIN-LINE.
274:            OPEN OUTPUT PRINTER1, SSN-LIST.
275:            DISPLAY ' BEGIN EXECUTION OF SSN DUMP' UPON PRINTER.
276:            PERFORM SET-UP-ACES-MASTER-FILE.
277:            PERFORM INTIALIZE-SOLDIER-COUNTERS.
278:            PERFORM PROCESS-SOLDIERS
279:                         UNTIL EOF-ACES-FILE.
280:            PERFORM SHUT-DOWN-ACES-MASTER-FILE.
281:            CLOSE SSN-LIST, PRINTER1.
282:            DISPLAY '    ' UPON PRINTER.
283:            DISPLAY ' RECORDS READ - ', NUMBER-RECORDS-READ
284:                 UPON PRINTER.
285:            DISPLAY  NUMBER-RECORDS-PRINTED, ' RECORDS WRITTEN TO '
286:              ' FILE SSN-LIST ' UPON PRINTER.
287:            DISPLAY ' END OF EXECUTION SSN.' UPON PRINTER.
288:            STOP RUN.
289:       *  ************************************************
290:        SET-UP-ACES-MASTER-FILE.
291:       *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
292:       *    INVOLVING THE ACES-MASTER-FILE.
293:       *
294:            OPEN INPUT    ACES-MASTER-FILE.
295:            READ ACES-MASTER-FILE  INTO  Z-RECORD,
296:                  AT END DISPLAY '  NO Z RECORD' UPON  PRINTER,
297:                   STOP RUN.
298:            PERFORM  PRINT-STATUS-REPORT.
```

```
299:       PRINT-STATUS-REPORT.
300:      *    MOVE  THE  DATA  OFF Z-RECORD  TO  REPORT  PRINT  LINES
301:      *
302:           MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
303:                                 OF  STATUS-REPORT.
304:           MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
305:           MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
306:           MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
307:           MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
308:           MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
309:           MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
310:      *
311:      *   GET THE CORRECT TIME AND DATE
312:      *    PLACE  TIME, DATE  INTO  REPORT PAGE
313:           PERFORM INTIALIZE-DATE-TIME.
314:           MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
315:           MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
316:      *    WRITE  THE STATUS REPORT
317:      *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
318:      *                          PAGE-TOP LINES.
319:           WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
320:           WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
321:           WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
322:           WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
323:           WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
324:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
325:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
326:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
327:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
328:      *
329:       INTIALIZE-DATE-TIME.
330:      *
331:           ACCEPT MACHINE-DATE FROM DATE.
332:                  ACCEPT MACHINE-TIME FROM TIME.
333:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
334:      *
335:      *
336:       SHUT-DOWN-ACES-MASTER-FILE.
337:      *     ACES-MASTEFILE WILL BE CLOSED
338:           CLOSE ACES-MASTER-FILE.
339:      *
340:      * ***************************************************************
341:      *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR SSN
342:      *    FILE PROCESSING
343:      *   ***************************************************************
344:      * THIS IS THE TOP OF THE SSN PROCESSING LOOP
345:      *  IT WILL BE REPEATED A NUMER OF TIMES EQUAL TO THE
346:      *  NUMBER OF   DATA RECORDS
347:      *  ********************************************************
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```
      INTIALIZE-SOLDIER-COUNTERS.
          MOVE ZEROS TO RECORD-COUNTERS.
      PROCESS-SOLDIERS.
     *  IF JUST A LISTING OF SSN IS DESIRED THE FOLLOWING
     *  CODE  SHOULD BE LEFT IN
          PERFORM INPUT-ACES-RECORD UNTIL
             RECORD-TYPE OF MASTER-RECORD EQUAL 'A'
             OR
             EOF-ACES-FILE.
         IF RECORD-TYPE OF MASTER-RECORD   IS EQUAL TO 'A'
               MOVE MASTER-RECORD TO A-RECORD
                PERFORM PRINT-SOLDIER.
          IF NOT EOF-ACES-FILE PERFORM INPUT-ACES-RECORD.
     *
     *     IN THE EVENT THAT A PARTICULAR CONDITION IS REQUESTED
     *       IE SATISFTIES ONE OF THE STATUS FLAGS IT WILL
     *       BE IMPLEMENTED HERE
     *        NOTE THE REMAINING LINES ARE CODED IN ANSI BUT ARE
     *       ENTRIES MERELY PULL THE * COMMENT CHARACTER
     *      THE REST WERE NOT IMPLEMENTED AS DEEMED UNNESECARY
      INPUT-ACES-RECORD.
           READ ACES-MASTER-FILE
            AT END MOVE 1 TO ACES-FILE-FLAG
            MOVE 999999999 TO SSN OF MASTER-RECORD
             MOVE 'X' TO RECORD-TYPE OF MASTER-RECORD.
            IF SSN OF MASTER-RECORD EQUALS 999999999 MOVE
                          1 TO ACES-FILE-FLAG.
           ADD 1 TO NUMBER-RECORDS-READ.
           ADD 1 TO DUMMY-COUNTER.
           IF DUMMY-COUNTER GREATER THAN 500
              DISPLAY ' COUNT - ', NUMBER-RECORDS-PRINTED
                 UPON PRINTER,
              MOVE ZEROS TO DUMMY-COUNTER.
         IF RECORD-TYPE OF MASTER-RECORD NOT EQUAL
                 'A' AND 'B' AND 'T'
            DISPLAY ' UNKNOWN RECORD TYPE FOUND - ' SEARCH-KEY OF
                MASTER-RECORD.
      PRINT-SOLDIER.
          ADD 1 TO NUMBER-RECORDS-PRINTED.
          MOVE SSN OF A-RECORD TO SSN-CODE.
          MOVE SPACES TO REST.
          WRITE SSN-DATA  .
EOF:389
0:>
```

```
1:       IDENTIFICATION DIVISION.
2:       PROGRAM-ID. DMDC.
3:       AUTHOR. JOHN HAMILL.
4:       INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
5:       DATE-WRITTEN. MAY 1980.
6:       DATE-COMPILED.
7:       SECURITY. NO SECURITY CLEARANCE.
8:       REMARKS.   THE PURPOSE OF THIS PROGRAM IS
9:             INCORPORATE DMDC DATA ON TO A-RECORDS.
10:      ENVIRONMENT DIVISION.
11:      CONFIGURATION SECTION.
12:      SOURCE-COMPUTER. UNIVAC-1108.
13:      OBJECT-COMPUTER. UNIVAC-1108.
14:      INPUT-OUTPUT SECTION.
15:      FILE-CONTROL.
16:          SELECT  ACES-MASTER-FILE ASSIGN TO MASS-STORAGE MASTER
17:                      ORGANIZATION IS INDEXED,
18:                  ACCESS MODE IS SEQUENTIAL
19:                  PROCESSING MODE IS SEQUENTIAL,
20:                  FILE-LIMIT IS 20000
21:                  ACTUAL KEY IS  SEARCH-KEY.
22:          SELECT PRINTER1 ASSIGN TO PRINTER.
23:          SELECT DMDC ASSIGN TO CARD-READER DMDATA.
24:      DATA DIVISION.
25:      FILE SECTION.
26:      *
27:       FD  ACES-MASTER-FILE
28:           LABEL RECORDS ARE STANDARD,
29:           RECORD CONTAINS 300 CHARACTERS,
30:           BLOCK CONTAINS 30 RECORDS.
31:      *
32:       01  MASTER-RECORD.
33:           03  SEARCH-KEY.
34:            05   SSN   PIC  9(9).
35:            05   RECORD-TYPE PIC X.
36:           03  DATA-AREA PIC  X(290).
37:      *
38:      * THE RECORD LENGTH ON THE ORIGINAL DMDC TAPE WAS 133
39:      * WHICH WAS TOO LARGE FOR THE ATX TAPE CONVERSION
40:      * UTILITY TO HANDLE PROPERLY.  SINCE 133 = 7 * 19,
41:      * I USED 7 19 CHARACTER RECORDS FOR EACH DMDC RECORD
42:      * ON OUTPUT.   THIS MUST BE PLACED TOGETHER AGAIN IN
43:      * THIS PROGRAM.
44:      *
45:       FD   DMDC
46:           LABEL RECORDS ARE STANDARD,
47:            RECORD CONTAINS 19 CHARACTERS.
48:       01  DMDC-RECORD-DUMMY.
49:           02 DMDC-DUMMY    PIC X(19).
50:           02  DUMMY-SUB REDEFINES DMDC-DUMMY.
51:               03  SSN          PIC X(9).
52:               03  DMDC-SUB-10   PIC X(10).
```

```
 53:       FD  PRINTER1
 54:           LABEL RECORDS ARE OMITTED
 55:                  DATA RECORD IS PRINT-LINE.
 56:       01  PRINT-LINE.
 57:           03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
 58:           03 PRINT-DATA  PIC  X(121).
 59:       WORKING-STORAGE SECTION.
 60:       77  DUMMY-COUNTER   PIC 9(6) VALUE 0.
 61:      *
 62:       77  NO-DMDC-DATA-COUNTER PIC 9(11) VALUE 0.
 63:       77  INDX   PIC 9 VALUE 0.
 64:       77  SSN-HOLD   PIC 9(9) VALUE 0.
 65:      *
 66:      *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
 67:      *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
 68:      *
 69:       01  MACHINE-DATE-TIME.
 70:           03 MACHINE-DATE.
 71:             05 MM-DATE  PIC  99.
 72:             05 DD-DATE  PIC  99.
 73:             05 YY-DATE  PIC  99.
 74:           03 MACHINE-TIME.
 75:             05 HOUR-DATE PIC 99.
 76:             05 MIN-DATE  PIC 99.
 77:             05 SEC-DATE  PIC 99.
 78:      *
 79:      *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
 80:      *  FOR SORTING ON THE 6 FIELD CODE
 81:      *
 82:       01  SEQUENCED-DATE.
 83:           03  YY-DATE   PIC  99.
 84:           03  MM-DATE   PIC  99.
 85:           03  DD-DATE   PIC  99.
 86:      *
 87:      * THIS RECORD HOLDS THE DMDC RECORD TO BE BUILT
 88:      *
 89:       01  DMDC-RECORD.
 90:           02  SSN      PIC 9(9).
 91:           02  DMDC-DATA.
 92:           03  DMDC-PART-0.
 93:               05  DMDC-BIRTH     PIC 9(6).
 94:               05 FILLER   PIC X(2).
 95:               05 SEX       PIC X.
 96:               05 FILLER    PIC X.
 97:           03  DMDC-PART  OCCURS 6 TIMES   PIC X(19).
 98:      *
 99:      *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
100:      *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
101:      *  AND SOME RECORD TYPE (A,B,T, OR V)
102:      *
103:      *
```

```
104:       *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
105:       *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
106:       *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
107:       *  NUMERIC VALUE
108:       *
109:        01  A-RECORD.
110:            02 A-RECORD-DUMMY.
111:            03  SSN-TYPE .
112:              05  SSN PIC   9(9).
113:              05  RECORD-TYPE  PIC  X VALUE 'A'.
114:            03  MASTER-FLAGS.
115:              05  BSEP-LIT-STATUS PIC  9.
116:                   88  NO-B-RECORD VALUE 0.
117:                   88  BSEP-LIT-PARTIC       VALUE  1.
118:                   88  BSEP-LIT-NON-PARTIC       VALUE 2.
119:              05  BSEP-ESL-STATUS PIC  9.
120:                   88  NO-B-RECORD          VALUE 0.
121:                   88  BSEP-ESL-PARTIC      VALUE 1.
122:                   88  BSEP-ESL-NON-PARTIC VALUE 2.
123:              05  VO-TECH-STATUS PIC  9.
124:                   88  NO-T-RECORD          VALUE 0.
125:                   88  VO-TECH-PARTIC       VALUE 1.
126:                   88  VO-TECH-NON-PARTIC   VALUE 2.
127:              05  VEAP-STATUS PIC 9.
128:                   88  NO-V-RECORD              VALUE 0.
129:                   88  VEAP-PARTIC              VALUE 1.
130:                   88  VEAP-WITHDRAW-RETURN     VALUE 2.
131:                   88  VEAP-WITHDRAW-NO-RETURN VALUE 3.
132:                   88  VEAP-NON-PARTIC          VALUE 4.
133:            03  A-RECORD-STATUS.
134:              05  MILPERCEN-FLAG PIC 9.
135:                   88  MILPERCEN-PRESENT        VALUE 1.
136:              05  DMDC-FLAG PIC  9.
137:                   88  DMDC-PRESENT             VALUE 1.
138:              05  TSC-FLAG  PIC  9.
139:                   88  TSC-PRESENT              VALUE 1.
140:              05  EREC-FLAG PIC  9.
141:                   88  EREC-PRESENT             VALUE 1.
142:              05  CREATE-DATE.
143:                   07 CREATE-YY  PIC 99.
144:                   07 CREATE-MM  PIC 99.
145:                   07 CREATE-DD  PIC 99.
146:              05  LAST-MOD-DATE.
147:                   07 LAST-MOD-YY PIC 99.
148:                   07 LAST-MOD-MM PIC 99.
149:                   07 LAST-MOD-DD PIC 99.
150:            03  CONTROL-INFORMATION.
151:              05  DOB.
152:                   07 DOB-YY  PIC  99.
153:                   07 DOB-MM  PIC  99.
154:                   07 DOB-DD  PIC  99.
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155:             05  SEX  PIC  X.
156:                 88 MALE    VALUE 'M'.
157:                 88 FEMALE  VALUE 'F'.
158:           03  MILPERCEN-DATA.
159:             07 SEX PIC X.
160:             07 RACE PIC X.
161:             07 MARST PIC X.
162:             07 DOB PIC X(6).
163:             07 TERMS PIC X.
164:             07 ETSDT PIC X(6).
165:             07 EGPCD PIC  X.
166:             07 BPEDT PIC XXXX.
167:             07 PAYGR PIC X.
168:             07 DOR PIC X(6).
169:             07 AFQSC PIC XX.
170:             07 CIVED PIC X.
171:             07 PMOS PIC X(5).
172:             07 DMOS PIC X(5).
173:             07 TYPLA PIC XX.
174:             07 DATLA PIC X(6).
175:             07 PSVCI PIC X.
176:             07 EERWA PIC XXX.
177:             07 CMF PIC XX.
178:             07 AITDT PIC XXX.
179:             07 GTSCR PIC XXX.
180:             07 PQDES PIC X(4).
181:             07 PSQDT PIC X(4).
182:             07 PQSCR PIC XXX.
183:             07 PQPER PIC XX.
184:               07  SMOS   PIC X(5).
185:               07  FILLER  PIC X(4).
186:           03   DMDC-DATA        PIC X(124).
187:           03   TSC-DATA         PIC X(56).
188:       *
189:       *
190:       *
191:       *
192:       *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
193:       *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
194:       *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
195:       *  INDEX FOR Z RECORD IS  000000000Z
196:       *
197:        01  Z-RECORD.
198:           03 SSN-TYPE.
199:             05  SSN  PIC 9(9).
200:             05  RECORD-TYPE PIC  X  VALUE 'Z'.
201:           03 INTIALIZED-DATE.
202:             05   INTIALIZED-YY  PIC  99.
203:             05   INTIALIZED-MM  PIC  99.
204:             05   INTIALIZED-DD  PIC  99.
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205:           03 LAST-MODIFIED-DATE.
206:             05  LAST-MODIFIED-YY  PIC  99.
207:             05  LAST-MODIFIED-MM  PIC  99.
208:             05  LAST-MODIFIED-DD  PIC  99.
209:           03 RECORD-COUNTS.
210:             05   NUMBER-OF-A-RECORDS PIC  9(7).
211:             05   NUMBER-OF-B-RECORDS PIC  9(7).
212:             05   NUMBER-OF-T-RECORDS PIC  9(7).
213:             05   NUMBER-OF-V-RECORDS PIC  9(7).
214:             05   TOTAL-RECORDS       PIC  9(11).
215:       *
216:       *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
217:       *
218:        01  STATUS-REPORT.
219:           03 LINE-1.
220:             05  FILLER PIC X(20) VALUE SPACES.
221:             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
222:       -     ' FILE'.
223:           03 LINE-2.
224:             05  FILLER  PIC X(30) VALUE SPACES.
225:             05  FILLER  PIC X(8)  VALUE 'TIME   '.
226:             05  SHOW-TIME   PIC   X(6).
227:           03 LINE-3.
228:             05  FILLER  PIC X(30) VALUE SPACES.
229:             05  FILLER  PIC X(8)  VALUE  'DATE    '.
230:             05  SHOW-DATE   PIC  99/99/99.
231:           03 LINE-4.
232:             05  FILLER  PIC  X(3) VALUE SPACES.
233:             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
234:             05  FILLER  PIC  X(9) VALUE SPACES.
235:             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
236:             05  FILLER  PIC  X(23) VALUE   SPACES.
237:             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
238:             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
239:           03 LINE-5.
240:             05  FILLER  PIC  X(12) VALUE SPACES.
241:             05  FILLER  PIC  X(15) VALUE  'A'.
242:             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
243:           03 LINE-6.
244:             05  FILLER  PIC  X(12)  VALUE SPACES.
245:             05  FILLER  PIC  X(15)  VALUE 'B'.
246:             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
247:           03 LINE-7.
248:             05  FILLER   PIC  X(12) VALUE SPACES.
249:             05  FILLER   PIC  X(15) VALUE   'T'.
250:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
251:             05  FILLER   PIC  X(25) VALUE SPACES.
252:             05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
253:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
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254:           03 LINE-8.
255:             05  FILLER  PIC  X(12) VALUE SPACES.
256:             05  FILLER  PIC  X(:5) VALUE 'V'.
257:             05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
258:           03  LINE-9.
259:             05 FILLER PIC  X(28) VALUE SPACES.
260:             05 FILLER PIC  X(6)  VALUE '------'.
261:           03  LINE-10.
262:             05 FILLER  PIC  X(9) VALUE SPACES.
263:             05 FILLER  PIC  X(15) VALUE 'TOTAL'.
264:             05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
265:       01  RECORD-COUNTERS.
266:          03 DMDC-RECORDS-READ PIC 9(9) VALUE 0.
267:          03 UPDATED-A-RECORDS PIC 9(9) VALUE 0.
268:       01  DMDC-RECORD-FLAG PIC 9.
269:             88 DMDC-RECORD-MATCHES VALUE 0.
270:               88 RECORD-REJECTED VALUE 1.
271:       01   ACES-FILE-FLAG PIC 9 VALUE 0.
272:             88 EOF-ACES-MASTER-FILE VALUE 1.
273:        01 DMDC-FILE-FLAG PIC 9 VALUE 0.
274:              88  EOF-DMDC-FILE VALUE 1.
275:       PROCEDURE DIVISION.
276:       MAIN-LINE.
277:           OPEN OUTPUT PRINTER1.
278:           PERFORM SET-UP-ACES-MASTER-FILE.
279:           PERFORM  SET-UP-DMDC-DATA-TAPE.
280:            PERFORM INPUT-NEXT-A-RECORD.
281:           DISPLAY ' DMDC EXECUTION PRIMING RECORDS '.
282:           DISPLAY '      DMDC-RECORD - ' DMDC-RECORD-DUMMY.
283:           DISPLAY '      MASTER-RECORD - ' MASTER-RECORD.
284:           PERFORM  PROCESS-SOLDIER  THROUGH INPUT-NEXT-A-RECORD
285:                 UNTIL EOF-ACES-MASTER-FILE OR EOF-DMDC-FILE.
286:      * CHANGE THE 10 TIMES TO EOF-ACES-MASTER-FILE MARKER AFTER TESTING JNH
287:      *  AND EOF-DMDC-FILE NOTE THAT BOTH WILL SHUT OFF PROCESS
288:           PERFORM SHUT-DOWN-ACES-MASTER-FILE.
289:            PERFORM SUMMARY-STATS.
290:           STOP RUN.
291:       SET-UP-DMDC-DATA-TAPE.
292:           OPEN INPUT DMDC.
293:           CLOSE DMDC.
294:           OPEN INPUT DMDC.
295:           MOVE 0 TO DMDC-FILE-FLAG.
296:           PERFORM INPUT-DMDC-RECORD.
297:      *  **************************************************
298:       SET-UP-ACES-MASTER-FILE.
299:      *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
300:      *    INVOLVING THE ACES-MASTER-FILE.
301:      *
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302:           OPEN I-O        ACES-MASTER-FILE.
303:           MOVE  ZEROES  TO  SSN OF SEARCH-KEY.
304:           MOVE  'Z'  TO   RECORD-TYPE OF SEARCH-KEY.
305:           READ ACES-MASTER-FILE INTO  Z-RECORD,
306:                           AT END MOVE 1 TO ACES-FILE-FLAG.
307:           PERFORM  PRINT-STATUS-REPORT.
308:        PRINT-STATUS-REPORT.
309:       *    MOVE  THE  DATA  OFF   Z-RECORD  TO  REPORT  PRINT  LINES
310:       *
311:           MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
312:                                 OF  STATUS-REPORT.
313:           MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
314:           MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
315:           MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
316:           MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
317:           MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
318:           MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
319:       *
320:       *   GET THE CORRECT TIME AND DATE
321:       *    PLACE  TIME, DATE  INTO  REPORT PAGE
322:           PERFORM INTIALIZE-DATE-TIME.
323:           MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
324:           MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
325:       *    WRITE  THE STATUS REPORT
326:       *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
327:       *                        PAGE-TOP LINES.
328:           WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
329:           WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
330:           WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
331:           WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
332:           WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
333:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
334:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
335:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
336:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
337:       *
338:        INTIALIZE-DATE-TIME.
339:       *
340:           ACCEPT MACHINE-DATE-TIME FROM DATE-TIME.
341:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
342:       *
343:       *
344:        SHUT-DOWN-ACES-MASTER-FILE.
345:       *     A STATUS REPORT WILL BE GENERATED
346:       *  ALL COUNTERS WILL BE UPDATED
347:       *     A MODIFIED Z-RECORD WILL BE REWRITTEN
348:       *     ACES-MASTEFILE WILL BE CLOSED
349:           PERFORM PRINT-STATUS-REPORT.
350:           PERFORM WRITE-Z-RECORD.
351:           CLOSE ACES-MASTER-FILE, DMDC.
352:       *
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353:       WRITE-Z-RECORD.
354:           MOVE  SEQUENCED-DATE TO LAST-MODIFIED-DATE OF Z-RECORD.
355:           MOVE Z-RECORD TO MASTER-RECORD.
356:           REWRITE MASTER-RECORD
357:                 INVALID KEY  DISPLAY 'Z RECORD NOT WRITTEN'
358:                    UPON PRINTER.
359:      * ****************************************************************
360:      *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR DMDC
361:      *    FILE PROCESSING
362:      *   ****************************************************************
363:      * THIS IS THE TOP OF THE DMDC PROCESSING LOOP
364:      *  IT WILL BE REPEATED A NUMER OF TIMES EQUAL TO THE
365:      *  NUMBER OF DMDC DATA RECORDS
366:      *  ***********************************************************
367:       PROCESS-SOLDIER.
368:      *
369:            ADD 1 TO DUMMY-COUNTER.
370:            IF DUMMY-COUNTER EQUALS 200
371:                 MOVE ZEROS TO DUMMY-COUNTER
372:                DISPLAY ' ', SSN OF MASTER-RECORD, ' AT DMDC - ',
373:                    DMDC-RECORDS-READ  UPON PRINTER.
374:      * NEXT WE WILL SEE IF THERE IS A DMDC-RECORD ON THIS SOLDIER
375:           PERFORM INPUT-DMDC-RECORD UNTIL
376:                   SSN OF DMDC-RECORD IS NOT LESS THAN
377:                        SSN OF MASTER-RECORD.
378:      *
379:      * IF THERE IS A DMDC RECORD IT WILL NOW BE IN
380:      * MEMORY NEXT WE CHECK TO SEE IF THEY MATCH
381:           PERFORM VERIFY-DMDC-MATCH.
382:      *
383:           IF DMDC-RECORD-MATCHES
384:                       PERFORM UPDATE-A-RECORD,
385:                        PERFORM REWRITE-A-RECORD,
386:           ELSE
387:               ADD 1 TO NO-DMDC-DATA-COUNTER.
388:       INPUT-NEXT-A-RECORD.
389:      * SINCE THERE IS MORE THAN ONE TYPE OF RECORD WE SELECT ONLY
390:      * THE MASTER RECORD FOR EACH SOLDIER
391:          PERFORM INPUT-NEXT-LOGICAL-RECORD.
392:           PERFORM INPUT-NEXT-LOGICAL-RECORD UNTIL
393:                    EOF-ACES-MASTER-FILE
394:                  OR
395:                    RECORD-TYPE OF MASTER-RECORD EQUALS 'A'.
396:       INPUT-NEXT-LOGICAL-RECORD.
397:           READ ACES-MASTER-FILE INTO A-RECORD
398:                AT END MOVE 1 TO ACES-FILE-FLAG.
399:            IF SSN OF A-RECORD EQUALS 999999999
400:                          MOVE 1 TO ACES-FILE-FLAG.
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401:       VERIFY-DMDC-MATCH.
402:      * NOTE THAT ANY VALIDATION OF THE RECORDS SHOULD BE DONE HERE
403:           MOVE 0 TO DMDC-RECORD-FLAG.
404:      *
405:            IF SSN OF A-RECORD NOT EQUAL TO SSN OF DMDC-RECORD,
406:                                MOVE 1 TO DMDC-RECORD-FLAG.
407:      *
408:      * DMDC SENT BACK ALL SSN I SENT BY FILLING NON-MATCHES
409:      * WITH ZEROS.  CONSEQUENTLY, A MATCH WILL BE DECIDED
410:      * BY THE PRESENCE OF A NONZERO DATE OF BIRTH
411:      *
412:                     IF DMDC-BIRTH EQUAL ZERO
413:                                         MOVE 1 TO DMDC-RECORD-FLAG.
414:       UPDATE-A-RECORD.
415:      * HERE WE WILL MOVE ALL THE DATA WE WISH OFF THE DMDC RECORD
416:      * AND INTO THE A-RECORD
417:            MOVE DMDC-DATA OF DMDC-RECORD
418:                           TO DMDC-DATA OF A-RECORD.
419:      *
420:      * PLACE BIRTH DATE AND SEX IN CONTROL IF NOT THERE ALREADY
421:      *
422:           IF DOB-YY OF CONTROL-INFORMATION LESS THAN 20
423:               OR GREATER 70
424:               MOVE DMDC-BIRTH TO DOB OF
425:                   CONTROL-INFORMATION.
426:           IF SEX OF CONTROL-INFORMATION EQUAL SPACES
427:               IF SEX OF DMDC-RECORD EQUALS '1'
428:                   MOVE 'M' TO SEX OF CONTROL-INFORMATION
429:               ELSE IF SEX OF DMDC-RECORD EQUALS '2'
430:                   MOVE 'F' TO SEX OF CONTROL-INFORMATION.
431:             ADD 1 TO UPDATED-A-RECORDS.
432:            MOVE 1 TO DMDC-FLAG OF A-RECORD.
433:        REWRITE-A-RECORD.
434:           MOVE 'A' TO RECORD-TYPE OF SEARCH-KEY.
435:           MOVE SEQUENCED-DATE TO LAST-MOD-DATE OF A-RECORD.
436:           MOVE A-RECORD TO MASTER-RECORD.
437:           REWRITE MASTER-RECORD
438:                       INVALID KEY DISPLAY
439:                          ' INVALID ATTEMPT REWRI *A* REC'
440:                     UPON PRINTER.
441:       INPUT-DMDC-RECORD.
442:      *
443:      * THE DMDC FILE MUST BE READ 7 TIMES TO BUILD
444:      * ONE DMDC RECORD.
445:      *
```

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446:            READ DMDC  AT END MOVE 1 TO DMDC-FILE-FLAG.
447:           MOVE SSN OF DMDC-RECORD-DUMMY TO
448:               SSN OF DMDC-RECORD.
449:           MOVE DMDC-SUB-10 TO DMDC-PART-0.
450:           IF SSN OF DMDC-RECORD NOT GREATER THAN SSN-HOLD
451:               DISPLAY ' SEQUENCING PROBLEM - HOLD SNN - ' SSN-HOLD
452:               DISPLAY ' NEW DMDC RECORD - ', DMDC-DUMMY.
453:           MOVE SSN OF DMDC-RECORD TO SSN-HOLD.
454:           PERFORM GET-DMDC-PARTS VARYING INDX FROM 1 BY 1
455:               UNTIL INDX GREATER 6.
456:
457:            ADD 1 TO DMDC-RECORDS-READ.
458:
459:       GET-DMDC-PARTS.
460:           READ DMDC AT END MOVE 1 TO DMDC-FILE-FLAG.
461:           MOVE DMDC-DUMMY TO DMDC-PART (INDX).
462:
463:       SUMMARY-STATS.
464:            DISPLAY DMDC-RECORDS-READ, 'DMDC RECS READ'
465:                    UPON PRINTER.
466:            DISPLAY NO-DMDC-DATA-COUNTER, 'NO DMDC DATA'
467:                    UPON PRINTER.
468:            DISPLAY UPDATED-A-RECORDS, 'UPDATED A RECS'
469:                    UPON PRINTER.
EOF:469
0:>
```

```
1:        IDENTIFICATION DIVISION.
2:        PROGRAM-ID. ACESS.
3:        AUTHOR. JOHN HAMILL.
4:        INSTALLATION. ABERDEEN PROVING GROUND, MD , 21010.
5:        DATE-WRITTEN. MAY 1980.
6:        DATE-COMPILED.
7:        SECURITY. NO SECURITY CLEARANCE.
8:        REMARKS.   THE PURPOSE OF THIS PROGRAM IS
9:                 GENERATE AN SPSS READABLE FILE
10:                       INPUTS ARE SOLICITED FROM THE TERMINAL
11:                       VALID INPUTS ARE
12:                       1 ALL A-RECORDS
13:                       3 ESL PARTICPANTS (A+B) RECORDS
14:                       4 LIT PARTICPANTS  A+B RECORDS
15:                       5 VOTECH PARTICIPANTS (A+T) RECORDS
16:                       2 ALL RECORDS (A+B+T)
17:               ONLY THESE INPUTS ALLOWED (1,3,4,5,2).
18:       ENVIRONMENT DIVISION.
19:       CONFIGURATION SECTION.
20:       SOURCE-COMPUTER. UNIVAC-1108.
21:       OBJECT-COMPUTER. UNIVAC-1108.
22:       INPUT-OUTPUT SECTION.
23:       FILE-CONTROL.
24:           SELECT ACES-MASTER-FILE
25:             ASSIGN TO MASS-STORAGE MASTER
26:               ORGANIZATION IS INDEXED,
27:                   ACCESS MODE IS SEQUENTIAL,
28:                FILE-LIMIT IS 2300
29:                  ACTUAL KEY IS DUM-SEARCH-KEY.
30:           SELECT PRINTER1 ASSIGN TO PRINTER.
31:           SELECT SPSS-FILE ASSIGN TO PRINTER SPFILE.
32:       *
33:        DATA DIVISION.
34:        FILE SECTION.
35:       *
36:        FD  ACES-MASTER-FILE
37:            LABEL RECORDS ARE STANDARD,
38:             RECORD CONTAINS 300 CHARACTERS,
39:             BLOCK CONTAINS 30 RECORDS.
40:       *
41:        01  MASTER-RECORD.
42:            03  SEARCH-KEY.
43:             05   SSN   PIC  9(9).
44:             05   RECORD-TYPE PIC X.
45:            03  DATA-AREA PIC  X(290).
46:        FD  PRINTER1
47:            LABEL RECORDS ARE OMITTED
48:                    DATA RECORD IS PRINT-LINE.
49:        01  PRINT-LINE.
50:            03 CARRIAGE-CONTROL-CHARACTER  PIC  X.
51:            03 PRINT-DATA  PIC  X(121).
```

```
52:       FD   SPSS-FILE
53:            LABEL RECORDS ARE OMITTED
54:            DATA RECORD IS SPSS-DATA.
55:       01   SPSS-LINE.
56:            03 REST         PIC  X(132).
57:       WORKING-STORAGE SECTION.
58:       77   DUM-SEARCH-KEY    PIC X(10).
59:       77   DUMMY-COUNTER     PIC 9(6) VALUE 0.
60:       77   OLD-SSN PIC 9(9) VALUE 0.
61:       01   RECORD-TABLE .
62:            03 RECORD-TABLE1 PIC X(300).
63:            03 RECORD-TABLE2 PIC X(300).
64:            03 RECORD-TABLE3 PIC X(300).
65:            03 RECORD-TABLE4 PIC X(300).
66:       *
67:       *  MACHINE DATE-TIME IS ACCEPTED FROM THE SYSTEM AND
68:       *  IS PRINTED OUT WHEN FILES ARE OPENED AND CLOSED
69:       *
70:       01   MACHINE-DATE-TIME.
71:            03 MACHINE-DATE.
72:              05 MM-DATE  PIC  99.
73:              05 DD-DATE  PIC  99.
74:              05 YY-DATE  PIC  99.
75:            03 MACHINE-TIME.
76:              05 HOUR-DATE PIC 99.
77:              05 MIN-DATE  PIC 99.
78:              05 SEC-DATE  PIC 99.
79:       *
80:       *  SEQUENCED DATE IS THE DATE IN THE FORM YYMMDD TO ALLOWN
81:       *  FOR SORTING ON THE 6 FIELD CODE
82:       *
83:       01   SEQUENCED-DATE.
84:            03  YY-DATE   PIC  99.
85:            03  MM-DATE   PIC  99.
86:            03  DD-DATE   PIC  99.
87:       *
88:       * THIS DUMMY HOLD ERROR IS BECAUSE NO WAY WAS FOUND
89:       * TO WRITE A 300 CHARACTER RECORD AND READ IT USING
90:       * THE SPSS PACKAGE
91:       *
92:       01   HOLD-OUT.
93:              03  SUBSET-1    PIC X(120).
94:              03  SUBSET-2    PIC X(120).
95:              03  SUBSET-3    PIC X(120).
96:
97:       *  SEARCH KEY IS THE INDEX INTO THE INDEXEXED SEQUNTIAL
98:       *  DATA BASE IT CONSISTS OF A SOCIAL SECURITY NUMBER
99:       *  AND SOME RECORD TYPE (A,B,T, OR V)
100:      *
101:      *
```

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102:      *  THE A RECORD IS THE MASTER RECORD FOR THE ACES FILE
103:      *  A SOLDIER MUST HAVE AN A RECORD TO HAVE A B,T, OR V
104:      *  TYPE OF RECORD  INDEXED BY NNNNNNNNNA  WHERE N IS A
105:      *  NUMERIC VALUE
106:      *
107:       01  A-RECORD.
108:           02 A-RECORD-DUMMY.
109:           05  SSN-TYPE .
110:             05  SSN PIC   9(9).
111:             05  RECORD-TYPE  PIC  X VALUE 'A'.
112:           03  MASTER-FLAGS.
113:             05  BSEP-LIT-STATUS PIC  9.
114:                  88  NO-B-RECORD VALUE 0.
115:                  88  BSEP-LIT-PARTIC       VALUE  1.
116:                  88  BSEP-LIT-NON-PARTIC       VALUE 2.
117:             05  BSEP-ESL-STATUS PIC  9.
118:                  88  NO-B-RECORD          VALUE 0.
119:                  88  BSEP-ESL-PARTIC      VALUE 1.
120:                  88  BSEP-ESL-NON-PARTIC VALUE 2.
121:             05  VO-TECH-STATUS PIC  9.
122:                  88  NO-T-RECORD          VALUE 0.
123:                  88  VO-TECH-PARTIC       VALUE 1.
124:                  88  VO-TECH-NON-PARTIC   VALUE 2.
125:             05  VEAP-STATUS PIC 9.
126:                  88  NO-V-RECORD              VALUE 0.
127:                  88  VEAP-PARTIC              VALUE 1.
128:                  88  VEAP-WITHDRAW-RETURN     VALUE 2.
129:                  88  VEAP-WITHDRAW-NO-RETURN VALUE 3.
130:                  88  VEAP-NON-PARTIC          VALUE 4.
131:           03  A-RECORD-STATUS.
132:             05  MILPERCEN-FLAG PIC 9.
133:                  88  MILPERCEN-PRESENT        VALUE 1.
134:             05  DMDC-FLAG PIC  9.
135:                  88  DMDC-PRESENT             VALUE 1.
136:             05  TSC-FLAG  PIC  9.
137:                  88  TSC-PRESENT              VALUE 1.
138:             05  EREC-FLAG PIC  9.
139:                  88  EREC-PRESENT             VALUE 1.
140:             05  CREATE-DATE.
141:                  07 CREATE-YY  PIC 99.
142:                  07 CREATE-MM  PIC 99.
143:                  07 CREATE-DD  PIC 99.
144:             05  LAST-MOD-DATE.
145:                  07 LAST-MOD-YY PIC 99.
146:                  07 LAST-MOD-MM PIC 99.
147:                  07 LAST-MOD-DD PIC 99.
148:           03  CONTROL-INFORMATION.
149:             05  DOB.
150:                  07 DOB-YY  PIC  99.
151:                  07 DOB-MM  PIC  99.
152:                  07 DOB-DD  PIC  99.
```

```
153:             05  SEX  PIC  X.
154:                 88 MALE    VALUE 'M'.
155:                 88 FEMALE  VALUE 'F'.
156:           03  MILPERCEN-DATA.
157:             07 SEX PIC X.
158:             07 RACE PIC X.
159:             07 MARST PIC X.
160:             07 DOB PIC X(6).
161:             07 TERMS PIC X.
162:             07 ETSDT PIC X(6).
163:             07 EGPCD PIC  X.
164:             07 EPEDT PIC XXXX.
165:             07 PAYGR PIC X.
166:             07 DOR PIC X(6).
167:             07 AFQSC PIC XX.
168:             07 CIVED PIC X.
169:             07 PMOS PIC X(5).
170:             07 DMOS PIC X(5).
171:             07 TYPLA PIC XX.
172:             07 DATLA PIC X(6).
173:             07 PSVCI PIC X.
174:             07 EERWA PIC XXX.
175:             07 CNF PIC XX.
176:             07 AITDT PIC XXX.
177:             07 GTSCR PIC XXX.
178:             07 PQDES PIC X(4).
179:             07 PSQDT PIC X(4).
180:             07 PQSCR PIC XXX.
181:             07 PQPER PIC XX.
182:               07  SMOS   PIC X(5).
183:               07  FILLER  PIC X(4).
184:           03   DMDC-DATA          PIC X(124).
185:           03   TSC-DATA           PIC X(56).
186:       *
187:       *
188:       *
189:       *  THE Z-RECORD IS ALWAYS MAINTAINED ON THE ACES MASTER FILE
190:       *  IT CARRIES THE RECORDS COUNTS, AND OTHER FILE INFORMATION
191:       *  CONSULT SYSTEM DOCUMENTATION FOR RECORD LAYOUT
192:       *  INDEX FOR Z RECORD IS  000000000Z
193:       *
194:        01  Z-RECORD.
195:           03 SSN-TYPE.
196:             05  SSN  PIC 9(9).
197:             05  RECORD-TYPE PIC  X  VALUE 'Z'.
198:           03 INTIALIZED-DATE.
199:             05   INTIALIZED-YY  PIC  99.
200:             05   INTIALIZED-MM  PIC  99.
201:             05   INTIALIZED-DD  PIC  99.
```

```
202:           03 LAST-MODIFIED-DATE.
203:             05  LAST-MODIFIED-YY  PIC  99.
204:             05  LAST-MODIFIED-MM  PIC  99.
205:             05  LAST-MODIFIED-DD  PIC  99.
206:           03 RECORD-COUNTS.
207:             05   NUMBER-OF-A-RECORDS PIC  9(7).
208:             05   NUMBER-OF-B-RECORDS PIC  9(7).
209:             05   NUMBER-OF-T-RECORDS PIC  9(7).
210:             05   NUMBER-OF-V-RECORDS PIC  9(7).
211:             05   TOTAL-RECORDS       PIC  9(11).
212:       *
213:       *   THE FOLLOWING ARE THE PRINT LINES FOR THE STATUS REPORT
214:       *
215:        01  STATUS-REPORT.
216:           03 LINE-1.
217:             05  FILLER PIC X(20) VALUE SPACES.
218:             05  FILLER PIC X(40) VALUE  'STATUS REPORT  ON  ACES MASTER
219:       -     ' FILE'.
220:           03 LINE-2.
221:             05  FILLER  PIC X(30) VALUE SPACES.
222:             05  FILLER  PIC X(8)  VALUE 'TIME   '.
223:             05  SHOW-TIME   PIC   X(8).
224:           03 LINE-3.
225:             05  FILLER  PIC X(30) VALUE SPACES.
226:             05  FILLER  PIC X(8)  VALUE  'DATE    '.
227:             05  SHOW-DATE   PIC  99/99/99.
228:           03 LINE-4.
229:             05  FILLER  PIC  X(3) VALUE SPACES.
230:             05  FILLER  PIC  X(11) VALUE 'TYPE RECORD'.
231:             05  FILLER  PIC  X(9) VALUE SPACES.
232:             05  FILLER  PIC  X(13) VALUE 'FREQUENCIES'.
233:             05  FILLER  PIC  X(23) VALUE   SPACES.
234:             05  FILLER  PIC  X(23) VALUE 'DATE INTIALIZED     '.
235:             05  SHOW-INTIALIZED-DATE PIC  99/99/99.
236:           03 LINE-5.
237:             05  FILLER  PIC  X(12) VALUE SPACES.
238:             05  FILLER  PIC  X(15) VALUE  'A'.
239:             05  SHOW-A-COUNT   PIC   ZZZ,ZZ9.
240:           03 LINE-6.
241:             05  FILLER  PIC  X(12)  VALUE SPACES.
242:             05  FILLER  PIC  X(15)  VALUE 'B'.
243:             05  SHOW-B-COUNT   PIC   ZZZ,ZZ9.
244:           03 LINE-7.
245:             05  FILLER   PIC  X(12) VALUE SPACES.
246:             05  FILLER   PIC  X(15) VALUE   'T'.
247:             05  SHOW-T-COUNT  PIC    ZZZ,ZZ9.
248:             05  FILLER   PIC  X(25) VALUE SPACES.
249:             05  FILLER   PIC  X(20) VALUE  'DATE LAST MODIFIED '.
250:             05  SHOW-MODIFY-DATE    PIC  99/99/99.
```

```
251:            03 LINE-8.
252:              05  FILLER  PIC  X(12) VALUE SPACES.
253:              05  FILLER  PIC  X(15) VALUE 'V'.
254:              05  SHOW-V-COUNT  PIC   ZZZ,ZZ9.
255:            03  LINE-9.
256:              05 FILLER PIC  X(28) VALUE SPACES.
257:              05 FILLER PIC  X(6)  VALUE '------'.
258:            03  LINE-10.
259:              05 FILLER  PIC  X(9) VALUE SPACES.
260:              05 FILLER  PIC  X(15) VALUE 'TOTAL'.
261:              05 SHOW-SUM-ABTV-RECORDS PIC  ZZZ,ZZZ,999.
262:         01  RECORD-COUNTERS.
263:            03 NUMBER-RECORDS-READ PIC 9(9) .
264:             03 LIT-COUNT PIC 9(9) VALUE 0.
265:             03 ESL-COUNT PIC 9(9) VALUE 0.
266:             03 VOTECH-COUNT PIC 9(9) VALUE 0.
267:             03 ALL-COUNT PIC 9(9) VALUE 0.
268:             03 A-COUNT PIC 9(9) VALUE 0.
269:          01  WANT-CRITERIA-SETUP.
270:                    03  WANT-CRITERIA     PIC 9.
271:               88 WANT-A VALUE 1.
272:               88 WANT-ALL VALUE 2.
273:               88 WANT-ESL VALUE 3.
274:               88 WANT-LIT VALUE 4.
275:               88 WANT-VOTECH VALUE 5.
276:           03 NUMBER-RECORDS-PRINTED PIC 9(9).
277:         01  ACES-FILE-FLAG PIC 9 VALUE 0.
278:            88 EOF-ACES-FILE VALUE 1.
279:         PROCEDURE DIVISION.
280:         MAIN-LINE.
281:              OPEN OUTPUT PRINTER1, SPSS-FILE.
282:              PERFORM SET-UP-ACES-MASTER-FILE.
283:              PERFORM GET-WRITE-CRITERIA.
284:                   DISPLAY '  WANT CRITERIA - ', WANT-CRITERIA.
285:              PERFORM PROCESS-FILE.
286:                  DISPLAY 'END OF FILE PROCESSING'.
287:              PERFORM SHUT-DOWN-ACES-MASTER-FILE.
288:              CLOSE SPSS-FILE, PRINTER1.
289:              DISPLAY ' RECORDS READ - ', NUMBER-RECORDS-READ.
290:              DISPLAY ' END OF EXECUTION ACESS.' .
291:              DISPLAY '  LIT COUNT    - ', LIT-COUNT.
292:              DISPLAY '  VOTECH-COUNT - ', VOTECH-COUNT.
293:              DISPLAY '  A COUNT      - ', A-COUNT.
294:              DISPLAY '  ESL COUNT    - ', ESL-COUNT.
295:              DISPLAY '  ALL COUNT    - ', ALL-COUNT.
296:              STOP RUN.
297:         *  **************************************************
298:          SET-UP-ACES-MASTER-FILE.
299:         *    THIS ROUTINE WILL BE THE FIRST STEP IN ANY RUN
300:         *    INVOLVING THE ACES-MASTER-FILE.
301:         *
```

```
302:           OPEN INPUT    ACES-MASTER-FILE.
303:           READ ACES-MASTER-FILE  INTO  Z-RECORD,
304:                 AT END DISPLAY '  NO Z RECORD' UPON  PRINTER,
305:                  STOP RUN.
306:           PERFORM  PRINT-STATUS-REPORT.
307:        PRINT-STATUS-REPORT.
308:       *    MOVE  THE  DATA  OFF Z-RECORD  TO  REPORT  PRINT  LINES
309:       *
310:           MOVE  INTIALIZED-DATE OF Z-RECORD TO SHOW-INTIALIZED-DATE
311:                                 OF  STATUS-REPORT.
312:           MOVE LAST-MODIFIED-DATE TO SHOW-MODIFY-DATE.
313:           MOVE  NUMBER-OF-A-RECORDS TO SHOW-A-COUNT.
314:           MOVE  NUMBER-OF-B-RECORDS TO SHOW-B-COUNT.
315:           MOVE  NUMBER-OF-T-RECORDS TO SHOW-T-COUNT.
316:           MOVE  NUMBER-OF-V-RECORDS TO SHOW-V-COUNT.
317:           MOVE  TOTAL-RECORDS TO  SHOW-SUM-ABTV-RECORDS.
318:       *      .
319:       *   GET THE CORRECT TIME AND DATE
320:       *    PLACE  TIME, DATE  INTO  REPORT PAGE
321:           PERFORM INTIALIZE-DATE-TIME.
322:           MOVE   MACHINE-TIME  TO  SHOW-TIME  OF  STATUS-REPORT .
323:           MOVE   SEQUENCED-DATE  TO  SHOW-DATE  OF STATUS-REPORT.
324:       *    WRITE  THE STATUS REPORT
325:       *    WRITE PRINT-LINE FROM LINE-1 OF STATUS-REPORT AFTER
326:       *                          PAGE-TOP LINES.
327:           WRITE PRINT-LINE FROM LINE-2 OF STATUS-REPORT AFTER 2 LINES.
328:           WRITE PRINT-LINE FROM LINE-3 OF STATUS-REPORT AFTER 2 LINES.
329:           WRITE PRINT-LINE FROM LINE-4 OF STATUS-REPORT AFTER 2 LINES.
330:           WRITE PRINT-LINE FROM LINE-5 OF STATUS-REPORT AFTER 2 LINES.
331:           WRITE PRINT-LINE FROM LINE-6 OF STATUS-REPORT AFTER 2 LINES.
332:           WRITE PRINT-LINE FROM LINE-7 OF STATUS-REPORT AFTER 2 LINES.
333:           WRITE PRINT-LINE FROM LINE-8 OF STATUS-REPORT AFTER 2 LINES.
334:           WRITE PRINT-LINE FROM LINE-9 OF STATUS-REPORT AFTER 2 LINES.
335:           WRITE PRINT-LINE FROM LINE-10 OF STATUS-REPORT AFTER 2 LINES.
336:       *
337:        INTIALIZE-DATE-TIME.
338:       *
339:           ACCEPT MACHINE-DATE FROM DATE.
340:                   ACCEPT MACHINE-TIME FROM TIME.
341:           MOVE CORRESPONDING MACHINE-DATE TO  SEQUENCED-DATE.
342:       *
343:       *
344:        SHUT-DOWN-ACES-MASTER-FILE.
345:       *     ACES-MASTEFILE WILL BE CLOSED
346:           CLOSE ACES-MASTER-FILE.
347:       *
```

```
348:      * ****************************************************************
349:      *    THE FOLLOWING PORTION OF THE  PROGRAM IS STRICTLY FOR ACESS
350:      *    FILE PROCESSING
351:      *   ****************************************************************
352:      * THIS IS THE TOP OF THE SSN PROCESSING LOOP
353:      *  IT WILL BE REPEATED A NUMER OF TIMES EQUAL TO THE
354:      *  NUMBER OF   DATA RECORDS
355:      *  ***************************************************
356:       GET-WRITE-CRITERIA.
357:           MOVE ZEROS TO RECORD-COUNTERS.
358:           DISPLAY 'ENTER EXTRACT TYPE DESIRED AS FOLLOWS '.
359:           DISPLAY ' 1 - FOR ALL A RECORDS '.
360:           DISPLAY ' 2 - FOR ALL RECORDS '.
361:           DISPLAY ' 3 - FOR ESL RECORDS '.
362:           DISPLAY ' 4 - FOR LIT RECORDS '.
363:           DISPLAY ' 5 - FOR VO-TECH RECORDS '.
364:           ACCEPT WANT-CRITERIA.
365:           IF WANT-CRITERIA LESS THAN 1 OR GREATER THAN 5
366:               DISPLAY ' *****INVALID CRITERIA*******TRY AGAIN - '
367:                   WANT-CRITERIA
368:               GO TO GET-WRITE-CRITERIA.
369:       PROCESS-FILE.
370:              DISPLAY   'FILE PROCESSING INITIATED '.
371:           PERFORM INPUT-ACES-RECORD UNTIL
372:              RECORD-TYPE OF MASTER-RECORD EQUAL 'A'
373:              OR
374:              EOF-ACES-FILE.
375:           DISPLAY  '  RECORD KEY OF PRIMING RECORD - ', SEARCH-KEY
376:                                          OF MASTER-RECORD.
377:           PERFORM PROCESS-SOLDIER
378:                           UNTIL EOF-ACES-FILE.
379:       PROCESS-SOLDIER.
380:            PERFORM BLANK-OUT-TABLE.
381:            MOVE SSN OF MASTER-RECORD TO OLD-SSN.
382:            ADD 1 TO DUMMY-COUNTER.
383:            IF DUMMY-COUNTER GREATER 200
384:               MOVE ZEROS TO DUMMY-COUNTER
385:                  DISPLAY  ' CURRENTLY EXECUTING SSN ', OLD-SSN.
386:            IF RECORD-TYPE OF MASTER-RECORD EQUAL 'A'
387:               PERFORM LOAD-INPUT-TABLE UNTIL SSN OF
388:                    MASTER-RECORD NOT EQUAL OLD-SSN
389:                       OR EOF-ACES-FILE
390:                PERFORM UNLOAD-INPUT-TABLE
391:            ELSE DISPLAY ' A-RECORD MISSING - '
392:               SEARCH-KEY OF MASTER-RECORD
393:                  PERFORM INPUT-ACES-RECORD.
394:        BLANK-OUT-TABLE.
395:           MOVE ZEROS TO RECORD-TABLE1.
396:           MOVE ZEROS TO RECORD-TABLE2.
397:           MOVE ZEROS TO RECORD-TABLE3.
398:           MOVE ZEROS TO RECORD-TABLE4.
```

```
399:        LOAD-INPUT-TABLE.
400:            IF RECORD-TYPE OF MASTER-RECORD EQUAL 'A'
401:               MOVE MASTER-RECORD TO A-RECORD
402:               MOVE MASTER-RECORD TO RECORD-TABLE1
403:            ELSE
404:            IF RECORD-TYPE OF MASTER-RECORD EQUAL 'B'
405:               MOVE MASTER-RECORD TO RECORD-TABLE2
406:            ELSE
407:            IF RECORD-TYPE OF MASTER-RECORD EQUAL 'T'
408:               MOVE MASTER-RECORD TO RECORD-TABLE3
409:            ELSE
410:               DISPLAY ' UNKNOWN RECORD TYPE ' SEARCH-KEY
411:                   OF MASTER-RECORD.
412:            PERFORM INPUT-ACES-RECORD.
413:       UNLOAD-INPUT-TABLE.
414:            IF WANT-A
415:               MOVE RECORD-TABLE1 TO HOLD-OUT
416:               PERFORM WRITE-SPSS-FILE
417:               ADD 1 TO A-COUNT.
418:            IF WANT-ALL
419:               MOVE RECORD-TABLE1 TO HOLD-OUT
420:               PERFORM WRITE-SPSS-FILE
421:               MOVE RECORD-TABLE2 TO HOLD-OUT
422:               PERFORM WRITE-SPSS-FILE
423:               MOVE RECORD-TABLE3 TO HOLD-OUT
424:               PERFORM WRITE-SPSS-FILE
425:               ADD 1 TO ALL-COUNT.
426:            IF WANT-ESL
427:               AND (BSEP-ESL-PARTIC OR BSEP-ESL-NON-PARTIC)
428:               MOVE RECORD-TABLE1 TO HOLD-OUT
429:               PERFORM WRITE-SPSS-FILE
430:               MOVE RECORD-TABLE2 TO HOLD-OUT
431:               PERFORM WRITE-SPSS-FILE
432:               ADD 1 TO ESL-COUNT.
433:            IF WANT-LIT
434:               AND (BSEP-LIT-PARTIC OR BSEP-LIT-NON-PARTIC)
435:               MOVE RECORD-TABLE1 TO HOLD-OUT
436:               PERFORM WRITE-SPSS-FILE
437:               MOVE RECORD-TABLE2 TO HOLD-OUT
438:               PERFORM WRITE-SPSS-FILE
439:               ADD 1 TO LIT-COUNT.
440:            IF WANT-VOTECH
441:               AND (VO-TECH-PARTIC OR VO-TECH-NON-PARTIC)
442:               MOVE RECORD-TABLE1 TO HOLD-OUT
443:               PERFORM WRITE-SPSS-FILE
444:               MOVE RECORD-TABLE3 TO HOLD-OUT
445:               PERFORM WRITE-SPSS-FILE
446:               ADD 1 TO VOTECH-COUNT.
447:       INPUT-ACES-RECORD.
448:            READ ACES-MASTER-FILE
449:             AT END MOVE 1 TO ACES-FILE-FLAG
450:               MOVE 999999999 TO SSN OF MASTER-RECORD
451:               MOVE 'X' TO RECORD-TYPE OF MASTER-RECORD.
452:             IF SSN OF MASTER-RECORD EQUALS 999999999 MOVE
453:                              1 TO ACES-FILE-FLAG.
454:            ADD 1 TO NUMBER-RECORDS-READ.
455:       WRITE-SPSS-FILE.
456:             WRITE SPSS-LINE FROM SUBSET-1.
457:             WRITE SPSS-LINE FROM SUBSET-2.
458:             WRITE SPSS-LINE FROM SUBSET-3.
EOF:458
```

```
      DIMENSION IBLK(700), IREC(100)
      INTEGER BLKSIZ, NUMREC, WRTREC, RECSIZ, PADSIZ
C
C     SET UP VARIABLE BLOCK SIZE AND WORD SIZE
C
      BLKSIZ = 482
10    FORMAT(482A6)
      RECSIZ = 16
      WRTREC = 15
20    FORMAT(15A6)
      PADSIZ = 3
      NUMREC = 30
      IN = 0
      IOUT = 0
      ISKIP = 0
      READ(5,3) ISTRT
3     FORMAT(I6)
      IF(ISTRT.LE.0) GO TO 900
      ISKIP = ISTRT / NUMREC
      IOUT = ISKIP * NUMREC + 1
      WRITE (6,4) ISTRT, ISKIP, IOUT
4     FORMAT(' SKIP ',I6,' RECORDS, ',I6,' BLOCKS WILL BE SKIPPED ',
     +  /, '     RECORDING STARTS WITH RECORD ', I6)
      DO 850 I = 1,ISKIP
         IN = IN + 1
         CALL NTRAN(11,2,BLKSIZ,IBLK,IST,22)
         IF(IST.EQ.-2) GO TO 5000
850   CONTINUE
900   CONTINUE
      WRITE(6,5) IN
5     FORMAT('  BEGIN EXECUTION OF TAPE DUMP',I6,' BLOCKS SKIPPED')
1000  CONTINUE
      CALL NTRAN(11,2,BLKSIZ,IBLK,IST,22)
      IF(IST.EQ.-2) GO TO 5000
      IN = IN + 1
C
C     UNBLOCK THE RECORD AND WRITE
C
      DO 1020 I = 1,NUMREC
         DO 1010 J = 1,WRTREC
            ISPOT = PADSIZ + (I-1) * RECSIZ + J
            IREC(J) = IBLK(ISPOT)
1010     CONTINUE
         WRITE(12,20) (IREC(KK), KK=1,WRTREC)
         IOUT = IOUT + 1
         III = IOUT / 400
         III = IOUT - III * 400
         IF(III.EQ.0.OR.IOUT.LE.15) WRITE(6,25) IOUT, IN,
     +      (IREC(KK), KK = 1,3)
25       FORMAT(' RECORD - ',I7,' (',I7,') - ',3A6)
1020  CONTINUE
      GO TO 1000
5000  CONTINUE
      DO 6000 I = 1,RECSIZ
6000  IREC (I) = 6H999999
       WRITE(12,20) (IREC(KK), KK=1,WRTREC)
      WRITE(6,30) IN, IOUT
30    FORMAT(' IN - ', I7, ' ---- OUT - ',I7)
      STOP
      END
```

APPENDIX B

FUNCTIONAL DESIGN OF COMPUTER PROCESSING PROCEDURES IMPLEMENTED

APPENDIX B

FUNCTIONAL DESIGN OF COMPUTER PROCESSING PROCEDURES IMPLEMENTED

PROCEDURE: INITIALIZE (INIT. CODE)

PURPOSE: Initialize the main system data base:
ACES-STUDY-MASTER-FILE

INPUT: None

OUTPUT:
1. ACES-STUDY-MASTER-FILE
2. One record on this file, key: 000 00 0000 Z
   containing:
   1) Number of A records
   2) Number of B records
   3) Number of T records
   4) Number of V records
   5) Date initialized (YYMMDD)
   6) Date last modified (YYMMDD)
3. STATUS-REPORT

PROCESSING:
Create record 000 00 0000 Z
Print STATUS-REPORT
Close files.

PROCEDURE: TRADOC (TRADOC. CODE)

PURPOSES:

1. Incorporate TRADOC data on BSEP I into the data base (create/modify the B-record)
2. Create the A-record if necessary
3. Determine whether participant or non-participant in BSEP I - Literacy Phase and BSEP I - ESL Phase for each soldier.

INPUT:

1. TRADOC-DATA-TAPE
2. ACES-STUDY-MASTER-FILE

OUTPUT:

1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT
3. REJECTED-RECORDS-LIST

TABULATIONS FOR STATUS-REPORT:

A. Records counts
   1. Number of records on TRADOC-DATA-TAPE
   2. Number of A-records written (rewritten)
   3. Number of B-records written (rewritten)

B. Study counts
   1. Number of participants in BSEP I - Literacy Phase
   2. Number of non-participants in BSEP I - Literacy Phase
   3. Number of participants in BSEP I - ESL Phase
   4. Number of non-participants in BSEP I - ESL Phase

C. Error Count
   1. Number of records rejected from study.

PROCESSING: Initialization

For each record on the TRADOC-DATA-TAPE

1. Validate that the SSN/ASN is numeric
2. Retrieve/initialize the A-record
3. Retrieve/initialize the B-record
4. Determine BSEP I status

   If SELECT-ABLE-TEST-SCORE = "CR"
   reject record, not in BSEP study.

   If SELECT-ABLE-TEST-SCORE not = "ER"
   then BSEP - LIT participant if DAYS enrolled
   is positive. Else BSEP - LIT non-participant

   If SELECT-ABLE-TEST-SCORE = "ER"
   then BSEP - ESL participant if ESL = "E"
   Else non-participant
5. Move the appropriate data to the B-record via a MOVE CORRESPONDING command
6. Set appropriate flags and dates
7. If record accepted, rewrite/write the A- and B-records

Update record 000 00 0000 Z

Print STATUS-REPORT

Close files.

PROCEDURE: VOTECH (VOTECH. CODE)

PURPOSES:

1. Incorporate the VO-TECH data obtained in the field into the data base (create/modify the T-record)
2. Create the A-record if necessary
3. Determine whether participant or non-participant in the VO-TECH study

INPUT:

1. VO-TECH-DATA-TAPE
2. ACES-STUDY-MASTER-FILE

OUTPUT:

1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT
3. ERROR-REPORT

TABULATIONS FOR STATUS-REPORT:

A. Record counts
   1. Number of records on VO-TECH-DATA-TAPE
   2. Number of A-records written (rewritten)
   3. Number of T-records written (rewritten)

B. Study counts
   1. Number of participants in VO-TECH
   2. Number of non-participants in VO-TECH

C. Error counts
   1. Number of records with some type of error

PROCESSING: Initialization

For each record on the VO-TECH-DATA-TAPE

1. Validate that the SSN/ASN is numeric
2. Retrieve/initialize the A-record
3. Retrieve/initialize the T-record
4. Move the appropriate data to the T-record via a MOVE CORRESPONDING command
5. Set the appropriate flags and dates
6. Rewrite/write the A- and T-records
7. Perform checks on the data. If any check fails, print the record and underline the invalid data.

Update record 000 00 0000 Z

Print STATUS-REPORT

Close files.

PROCEDURE: MILPERCEN (MILPERCEN. CODE)

PURPOSES:
1. Incorporate MILPERCEN data into the data base (modify the A-record)
2. Get a preliminary idea of the degree of discrepancy between this source and earlier sources

INPUT:
1. MILPERCEN-DATA-TAPE (Sequentially ordered by SSN)
2. ACES-STUDY-MASTER-FILE

OUTPUT:
1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT
3. DISCREPANCY-REPORT
4. MISSING-MILPERCEN-DATA-REPORT

TABULATIONS FOR STATUS REPORT:

A. Record counts
   1. Number of records on MILPERCEN-DATA-TAPE
   2. Number of A-records rewritten
B. Error counts
   1. Number of A-records with no MILPERCEN match
   2. Number of MILPERCEN records rejected because of no match

CONTENTS OF DISCREPANCY REPORT:

1. For selected variables, degree of difference between various sources: frequency of difference

PROCESSING: Initialization

Sequentially pass through the ACES-STUDY-MASTER-FILE and for each A-record,

1. Pass through the MILPERCEN-DATA-TAPE until its SSN is not less than the SSN on the A-record
2. If match,

   Move appropriate data to the A-record via MOVE CORRESPONDING

   Set its appropriate flags and dates

   Rewrite the A-record

   Calculate discrepancies

   Else

   Write MISSING-MILPERCEN-DATA-REPORT

Process any remaining records on MILPERCEN-DATA-TAPE

Update record 000 00 0000 Z

Print STATUS-REPORT

Close files.

PROCEDURE: SSNLIST (SSN. COI.:)

PURPOSE: Generate a list of SSN/ASN's from the data base

INPUT:
1. ACES-STUDY-MASTER-FILE
2. Control-cards to control list generation

OUTPUT:
1. SSN-LIST-TAPE
2. STATUS-REPORT

TABULATIONS FOR STATUS-REPORT:

A. Number of SSN's written

PROCESSING: Initialization

Sequentially retrieve A-records and for each A-record,

Move data to output file via MOVE CORRESPONDING

Write the output record

Pring STATUS-REPORT

Close files.

PROCEDURE: DMDC (DMDC. CODE)

PURPOSES:
1. Incorporate DMDC data into the data base (create/modify the A, V-record)
2. Determine participant status in the VEAP program

INPUT:
1. DMDC-DATA-TAPE
2. ACES-STUDY-MASTER-FILE

OUTPUT:
1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT
3. ERROR-LIST

TABULATIONS FOR STATUS REPORT:

A. Record counts
   1. Number of records on DMDC-DATA-TAPE
   2. Number of A-records written (rewritten)
   3. Number of V-records written (rewritten)

B. Study counts for VEAP (if available)*
   1. Number of participants
   2. Number of non-participants

PROCESSING: Initialization

For each record on the DMDC-DATA-TAPE
1. Retrieve/initialize the A-record
2. Retrieve/initialize the V-record
3. Determine the VEAP-STATUS*

   If the ACCESSION-DATE is in June, 1977.

      Set the VEAP-STATUS flag

   Else

      The person is not part of the VEAP study and will require no V-record

4. Move the appropriate data to the A-record via a MOVE CORRESPONDING command
5. If V-record, move the appropriate data to the V-record via a MOVE CORRESPONDING command
6. Set appropriate dates and flags
7. Rewrite/write the A-record
8. If V-record, rewrite/write V-record

Update record 000 00 0000 Z

Pring STATUS-REPORT

Close files.

*VEAP study was cancelled, consequently all references to VEAP updating were not implemented.

PROCEDURE: TSC (Not Implemented)

PURPOSE:
1. Incorporate the TSC data on test scores into the data base (modify the A-record)

INPUT:
1. TSC-DATA-TAPE
2. ACES-STUDY-MASTER-FILE

OUTPUT:
1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT
3. MISSING-TSC-DATA-REPORT

TABULATIONS FOR STATUS REPORT:

A. Record count
   1. Number of records on TSC-DATA-TAPE
   2. Number of A-records updated
B. Error counts
   1. Number of A-records with no TSC match
   2. Number of TSC records rejected because of no match

PROCESSING: Initialization

Sequentially pass through the ACES-STUDY-MASTER-FILE and for each A-record,

1. Pass through the TSC-DATA-TAPE until its SSN is not less than the SSN on the A-record
2. If match,
   Move appropriate data to the A-record via MOVE CORRESPONDING
   Set appropriate flags and dates
   Rewrite the A-record

```
    Else,
      Write MISSING-TSC-DATA-REPORT
Process any remaining records on TSC-DATA-TAPE
Print STATUS-REPORT
Close files.
```

PROCEDURE: VEAP (Not Implemented)

PURPOSES:
1. Incorporate VEAP data into the data base (modify the V-record
2. Update the A-record

INPUT:
1. VEAP-DATA-TAPE
2. ACES-STUDY-MASTER-FILE

OUTPUT:
1. ACES-STUDY-MASTER-FILE
2. STATUS-REPORT

TABULATIONS FOR STATUS REPORT:

A. Record counts
   1. Number of records on VEAP-DATA-TAPE
   2. Number of V-records rewritten
   3. Number of A-records rewritten

PROCESSING: Initialization

For each record on the VEAP-DATA-TAPE
1. Validate that the SSN/ASN is numeric
2. Retrieve the A-record
3. Retrieve the V-record
4. Determine the VEAP status
5. Move the appropriate data to the V-record via a MOVE CORRESPONDING command
6. Set the appropriate flags and dates
7. If record accepted, rewrite the A- and V-records

Update record 000 00 0000 Z
Print STATUS-REPORT
Close files.

PROCEDURE: SPSS ACCESS (ACESS. CODE)

PURPOSES:
1. To create a file easily read by SPSS containing program specific data
2. To create a backup copy on tape of the ACES-STUDY-MASTER-FILE

INPUT:
1. ACES-STUDY-MASTER-FILE
2. Control cards

OUTPUT:
1. SPSS-DATA-TAPE
2. STATUS-REPORT

TABULATIONS FOR STATUS-REPORTS:

A. Count of records written

B. Breakdown by type

PROCESSING:

Initialization

Accept the control card parameters

Necessary options:
1. All A-records
2. All records
3. ESL sample (A & B records)
4. LIT sample (A & B records)
5. VOTECH sample (A & T records)

Sequentially pass through the file and for each A-record

If the soldier satisfies the options,

write the A-record

write the other records (if any)

Print STATUS-REPORT

Close files.

APPENDIX C

SPSS PROGRAM VARIABLES DEVELOPED

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
1-9	Social Security Number	SSNA	N	9	-	
10	Record Type	RECORDA	A	1		Value A
11	BSEP-LIT Status	BSEP	N	1	C	Codes: 0 No BSEP Data
						1 Participant
						2 Non-Participant
12	BSEP-ESL Status	ESL	N	1	C	Codes: 0 No BSEP Data
						1 Participant
						2 Non-Participant
13	VO-TECH Status	VOTECH	N	1	T	Codes: 0 No T-Record
						1 Participant
						2 Non-Participant
14	VEAP Status	VEAP	N	1		Codes: 0 No V-Record
						1 Participant
						2 Withdrew and Returned
						Participant
						3 Withdrew and Did Not
						Return Participant
						4 Non-Participant
15	MILPERCEN	MILPER	N	1	M	1 Record Present
16	DMDC	DMDC	N	1	D	1 Record Present
17	TSC	TSC	N	1	S	1 Record Present
18	EREC	EREC	N	1		1 Record Present
19-24	Date Record Created	DATARC	N	6		
25-30	Date Record Last Modified	DATARM	N	6		
31-36	Date of Birth	DOBA	N	6	-	
37	Sex	SEXA	A	1		
38	Sex	SEXM	A	1	M	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
39	Race	RACE*M*	A	1	M	
40	Marital Status	MARST*M*	A	1	M	
41-46	Date of Birth	DOB*M*	N	6	M	
47	Term of Service of Enlistment	TERMS	AN	1	M	
48-53	Date-Expiration of Term	ETSDT	N	6	M	
	of Service					
54	Ethnic Group	EGPCD	AN	1	M	
55-58	Yo-Mo Basic Pay Entry Date	BPEPT	N	4	M	
59	Pay Grade	PAYGR*M*	N	1	M	
60-65	Date of Rank	DOR	N	6	M	
66-67	AFQT Percentile Score	AFQSC	AN	2	M	
68	Academic Education Level	CIVED*M*	AN	1	M	
69-73	Primary MOS	PMOS	AN	5	M	
74-78	Duty MOS	DMOS*M*	AN	5	M	
79-80	Type of Last Accession	TYPLA	AN	2	M	
81-86	Date of Last Accession	DATLA	N	6	M	
87	Number of Times Enl/Reenl	PSVCI	N	1	M	
88-90	Enlisted Evaluation	EERWA	N	3	M	
	Weighted Average					
91-92	Career Management Field	CMF	AN	2	M	
93-95	AIT Graduation Date	AITDT	N	3	M	
96-98	General Technical Test Score	GTSCR	N	3	M	
99-102	SQ Designator-Primary MOS	PQDES	AN	4	M	
	Tested					
103-106	SQ Date Primary MOS Tested	PSQDT	N	4	M	
107-109	SQ Source-Primary MOS Tested	PSQCR	N	3	M	
110-111	SQ Percentile Score-Primary	PQPER	N	2	M	
	MOS Tested					

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
112-116	Secondary MOS	SMOS	AN	5	M	
117-120	Blank	-	-	4	-	
121-126	Date of Birth	DOBU	N	6	D	
127-128		HYEC	N	2	D	
129	Sex	SEXU	N	1	D	
130	Race	RACED	N	1	D	
131-132	Ethnic	ETH	N	2	D	
133-134	Marital Status	MSU	N	2	D	
135-136	Test Form	TESTFM	N	2	D	
137-138	AFQT Score	AFQTSC	N	2	D	
139-141	Aptitude Area Score 1	AASC1	N	3	D	
142-144	Aptitude Area Score 2	AASC2	N	3	D	
145-147	Aptitude Area Score 3	AASC3	N	3	D	
148-150	Aptitude Area Score 4	AASC4	N	3	D	
151-153	Aptitude Area Score 5	AASC5	N	3	D	
154-156	Aptitude Area Score 6	AASC6	N	3	D	
157-159	Aptitude Area Score 7	AASC7	N	3	D	
160-162	Aptitude Area Score 8	AASC8	N	3	D	
163-165	Aptitude Area Score 9	AASC9	N	3	D	
166-168	Aptitude Area Score 10	AASC10	N	3	D	
169-171	Aptitude Area Score 11	AASC11	N	3	D	
172-174	Aptitude Area Score 12	AASC12	N	3	D	
175-177	Composite Test Score 1	CTSC1	N	3	D	
178-180	Composite Test Score 2	CTSC2	N	3	D	
181-183	Composite Test Score 3	CTSC3	N	3	D	
184-186	Composite Test Score 4	CTSC4	N	3	D	
187-192	Date of Entry	DOE	N	6	D	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
193-194	Term of Enlistment	*TERMENL*	N	2	D	
195-196	Entry Pay Grade	*EPG*	N	2	D	
197-201	MOS	MOS*DM*	AN	5	D	
202-204		TAFMS*DM*	N	3	D	
205-206	Pay Grade	PG*DM*	N	2	D	
207-208	Marital Status	MS*DM*	N	2	D	
209-212	Date of Current Pay Grade	DCPG*DM*	N	4	D	
213-215	Time in Grade	TIG*DM*	N	3	D	
216-220	MOS	MOS*DL*	N	5	D	
221-223		TAFMS*DL*	N	3	D	
224-225	Pay Grade	PG*DL*	N	2	D	
226-227	Marital Status	MS*DL*	N	2	D	
228-233	Date of Separation	SEPDT	N	6	D	
234-237	Date of Current Pay Grade	DCPG*DL*	N	4	D	
238-240	Time in Grade (Months)	TIG*DL*	N	3	D	
241-243	Separation Program Designator/Number	ISC	N	3	D	
244	Character of Service	CSVC	N	1	D	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
1-9	Social Security Number	SSNB	N	9	-	
10	Record Type	*RECORDB*	A	1		Value B
11-16	Date Record Created	*DATBRC*	N	6		
17-22	Date Record Last Modified	*DATBRM*	N	6		
23-34	Last Name	*NAME*	A	12	B	
35	First Initial	*NAME1I*	A	1	B	
36	Sex	*SEXB*	A	1	B	
37	Race	*RACEB*	N	1	B	
38	Primary Language	*PLANG*	AN	1	B	
39	ESL	*ESLENR*	A	1	B	Codes: E=Enrolled
						N=Not Enrolled
40	Education Level	CIVEDB	N	1	B	
41	Military Component	*MILCOM*	A	1	B	
42	Mental Category	*MENTAL*	AN	1	B	
43-45	MOS	*MOSB*	AN	3	B	
46-47	Select ABLE Score	*SABLES*	AN	2	B	
48-49	Vocabulary Grade ABLE IA	*AIAVOC*	N	2	B	
50-51	Vocabulary Grade ABLE IB	*AIBVOC*	N	2	B	
52-53	Vocabulary Grade ABLE IA	*AIIAVOC*	N	2	B	
54-55	Reading Grade ABLE IA	*AIARD*	N	2	B	
56-57	Reading Grade ABLE IB	*AIBRD*	N	2	B	
58-59	Reading Grade ABLE IIA	*AIIARD*	N	2	B	
60-61	Spelling Grade ABLE IA	*AIASP*	N	2	B	
62-63	Spelling Grade ABLE IB	*AIBSP*	N	2	B	
64-65	Spelling Grade ABLE IIA	*AIIASP*	N	2	B	
66-67	Arithmetic Computation IA	*AIAAC*	N	2	B	
68-69	Arithmetic Computation IB	*AIBAC*	N	2	B	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
70-71	Arithmetic Computation IIA	*AIIAAC*	N	2	B	
72-73	Arithmetic Prob Solv IA	*AIAAPS*	N	2	B	
74-75	Arithmetic Prob Solv IB	*AIBAPS*	N	2	B	
76-77	Arithmetic Prob Solv IIA	*AIIAAPS*	N	2	B	
78	Grade Level Change	*GLC*	A	1	B	Codes: P=Plus, M=Minus C=No Change
79-80	Change in Grade Level	*GLDIFF*		2	B	
81-82	ALCPT Pre-Test Score	*PRESC*	N	2	B	
83-84	ALCPT Post-Test Score	*POSTSC*	N	2	B	
85-86	Days Enrolled in BSEPI	*DAYSBI*	N	2	B	
87	Success in AIT/OSUT/TSUT - Phase II	*SUCC*	A	1	B	
88	Discharge Information	*DINFO*	A	1	B	
89-90	Installation Identification	*INSTID*	A	2	B	
91	Month Completes	*MNCOMP*	AN	1	B	
92	Year Completes	*YRCOMP*	N	1	B	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
1-9	Social Security Number	SSNT	N	9	-	
10	Record Type	RECORDT	A	1		Value T
11-13	GT Score	GTSC	N	3	T	
14	Education Level	CIVEDT	AN	1	T	
15-20	Date of Birth	DOBT	N	6	T	
21	Race	RACET	A	1	T	
22	Sex	SEXT	A	1	T	
23-24	Grade (Rank)	PAYGRT	AN	2	T	Codes: E1-E9
25-30	Appointment Date E-5	DATEE5	N	6	T	
31-36	Appointment Date E-6	DATEE6	N	6	T	
37-42	Basic Enlisted Service Date	BESD	N	6	T	
43-48	Date of First MOS	D1MOS	N	6	T	
49-53	Duty MOS	DMOST	AN	5	T	
54-59	Previous Active Military	PAMS	N	6	T	
	Service					
60-65	Agreement Date	AGDATE	N	6	T	
66-68	EER Score	EERSC	N	3	T	
69	Source of EER Score	SEERSC	N	1	T	Codes: 1=REPT
						2=EERWA
70-73	Promotion Points	PROMPT	N	4	T	Valid for Current E-4 & E-5's
74	Disciplinary Actions-Number	DA268	N	1	T	
	of from DA268					
75	Disciplinary Actions-Number	DA2627	N	1	T	
	of from DA2627					
76-77	Blank	-	-	2	-	
78	Number of Cards per Case	CARDS	N	1	T	Codes: 2=2 Cards
						3=3 Cards

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
79	201 Data Completeness	*COMPLETE*	N	1	T	Codes: 0=201 Data Complete
						1=Bragg Partial 201 Data
						2=No 201 Data Obtained
						3=Bliss Partial 201 Data
80	Post-Education Center	*EDCENTER*	AN	1	T	Codes: 1=Bragg - Cos Com
						2=Bragg - 82 Div
						3=Bragg - Gruber
						4=Bragg - Main
						5=Polk
						6=Bliss - Main
						7=Bliss - 3rd Armor Cavalry
						8=Bliss - 11th Gp
						9=Bliss - Biggs
						0=Bliss - McGregor
						A=Bliss - Sgt Major Academy
81-86	Estimated Time of Separation	*ETS*	N	6	T	
87	VO-TECH Participation	*VTPART*	N	1	T	Codes: 1=Yes
						2=No
88	Participation-Automotive	*VTPARTA*	N	1	T	
89	Participation-Diesel	*VTPARTD*	N	1	T	
90	Participation-Welding	*VTPARTW*	N	1	T	
91	Participation-Electronics	*VTPARTE*	N	1	T	
92	Participation-Construction	*VTPARTC*	N	1	T	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
93	Other Participation-None	*OPART*	N	1	T	
94	Other Participation-BSEP	*PARTB*	N	1	T	
95	Other Participation-HSCP	*PARTHS*	N	1	T	
96	Other Participation-SOCAD/	*PARTSOC*	N	1	T	
	SOC					
97	Other Participation-Appren-	*PARTA*	N	1	T	
	ticeship					
98	Other Participation-MOS	*PARTMOS*	N	1	T	
	Refresher					
99	Other Participation-Head-	*PARTHEAD*	N	1	T	
	start: Gateway/ESL					
100	Other Participation-VEAP	*PARTVEAP*	N	1	T	
101-103	VO-TEC Course 1 Title	*VT1TITLE*	AN	3	T	
104-106	VO-TEC Course 1 Base	*VT1BASE*	N	3	T	
107-109	VO-TEC Course 1 Hours	*VT1HR*	AN	3	T	
110	VO-TEC Course 1 Completed	*VT1COMP*	N	1	T	
111-113	VO-TEC Course 2 Title	*VT2TITLE*	AN	3	T	
114-116	VO-TEC Course 2 Base	*VT2BASE*	N	3	T	
117-119	VO-TEC Course 2 Hours	*VT2HR*	AN	3	T	
120	VO-TEC Course 2 Completed	*VT2COMP*	N	1	T	
121-123	VO-TEC Course 3 Title	*VT3TITLE*	AN	3	T	
124-126	VO-TEC Course 3 Base	*VT3BASE*	N	3	T	
127-129	VO-TEC Course 3 Hours	*VT3HR*	AN	3	T	
130	VO-TEC Course 3 Completed	*VT3COMP*	N	1	T	
131-133	VO-TEC Course 4 Title	*VT4TITLE*	AN	3	T	
134-136	VO-TEC Course 4 Base	*VT4BASE*	N	3	T	
13. 9	VO-TEC Course 4 Hours	*VT4HR*	AN	3	T	

FIELD LOCATION	FIELD NAME	SPSS NAME	DATA FORM	NO. OF CHAR.	SOURCE OF DATA	COMMENT OR DATA DESCRIPTION
140	VO-TEC Course 4 Completed	*VT4COMP*	N	1	T	
141-143	VO-TEC Course 5 Title	*VT5TITLE*	AN	3	T	
144-146	VO-TEC Course 5 Base	*VT5BASE*	N	3	T	
147-149	VO-TEC Course 5 Hours	*VT5HR*	AN	3	T	
150	VO-TEC Course 5 Completed	*VT5COMP*	N	1	T	
151-153	VO-TEC Course 6 Title	*VT6TITLE*	AN	3	T	
154-156	VO-TEC Course 6 Base	*VT6BASE*	N	3	T	
157-159	VO-TEC Course 6 Hours	*VT6HR*	AN	3	T	
160	VO-TEC Course 6 Completed	*VT6COMP*	N	1	T	
161-163	VO-TEC Course 7 Title	*VT7TITLE*	AN	3	T	
164-166	VO-TEC Course 7 Base	*VT7BASE*	N	3	T	
167-169	VO-TEC Course 7 Hours	*VT7HR*	AN	3	T	
170	VO-TEC Course 7 Completed	*VT7COMP*	N	1	T	
171-173	VO-TEC Course 8 Title	*VT8TITLE*	AN	3	T	
174-176	VO-TEC Course 8 Base	*VT8BASE*	N	3	T	
177-179	VO-TEC Course 8 Hours	*VT8HR*	AN	3	T	
180	VO-TEC Course 8 Completed	*VT8COMP*	N	1	T	
181-183	VO-TEC Course 9 Title	*VT9TITLE*	AN	3	T	
184-186	VO-TEC Course 9 Base	*VT9BASE*	N	3	T	
187-189	VO-TEC Course 9 Hours	*VT9HR*	AN	3	T	
190	VO-TEC Course 9 Completed	*VT9COMP*	N	1	T	
191-193	VO-TEC Course 10 Title	*VT10TITL*	AN	3	T	
194-196	VO-TEC Course 10 Base	*VT10BASE*	N	3	T	
197-199	VO-TEC Course 10 Hours	*VT10HR*	AN	3	T	
200	Vo-TEC Course 10 Completed	*VT10COMP*	N	1	T	